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PREFACE

This number of the Bulletin contains as before articles on Tamil tradition and Tamil culture and in addition, articles on the culture of India and on South East Asia.

Following the articles on the Krishnavakaikars of Kanyakumari District in the last issue, an article on the Traditions and History of the Nānchināḍ Vellālas is included in this issue. Thiru Palaniswāmi, Director of Legal Studies of the Tamil Nadu Government has written on the International Law of War among the Ancient Tamils while Thiru Thirunāvukkarasu has written on their Ethical Philosophy. That India had a cultural heritage in Astronomy and Mathematics has been high-lighted by the Biographical sketches of ancient scholars in these subjects of Prof. K. A. Bajpai. Indian influences in the Far East form the subject matter of two articles, one by Dr. Devahuti of the Delhi University and another by Thiru P. S. Venkatasubba Rao. In addition, this issue contains articles on the ancient and traditional games, Arts and Crafts.

The Institute is grateful to all the scholars who have contributed a variety of articles on culture and traditions which appear in this number. It had to hold over some valuable articles for consideration of space, for publication in the next issue.

The Government of Tamil Nadu and the Government of India have kindly continued the financing of the Institute and its activities. The University of Madras, under its distinguished Vice-Chancellor, Thiru N. D. Sundaravadivélu, continues to

accommodate the Institute in its building, providing it with concomitant amenities and, the full and hearty co-operation of all its departments in the activities of the Institute and, also bears the cost of paper and printing of the issues of the Institute's Bulletin. The Executive Committee has also given valuable help in running this Institute.

Madras,
28th February 1974

DR. K. K. PILLAY,
Director.

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ARTICLES

THE TRADITIONS AND HISTORY OF THE NĀÑCHINĀḌ VEḶḶĀḶAS

BY

Dr. K. K. PILLAY, M.A., D.Litt., D.Phil (Oxon.)

The history of the Nāñchināḍ Veḷḷāḷas is interesting, because it presents a strange fusion of the typical Tamil culture and social organization with certain features of the neighbouring Malayāḷis. Nāñchināḍ comprises the taluks of Tovalai and Agastisvaram in the extreme south of the present Kanyakumari District.

The term Nāñchil occurs in the Verses 137 and 139 of the *Puṟanānūṟu*. Different attempts have been made to explain the genesis of this term. Nāñchil means ploughshare and Nāñchilnāḍu is the land of agricultural cultivation. A variant of this derivation is that Nāñchināḍu denotes நன் + செய் + நாடு i.e. the region where rich crops are grown. A totally different derivation is that 'Nāñchil' denotes the region of bastions or forts represented by the natural barriers like hills fortifying the land. But the forests and hills are found scattered only on the north and east; it is washed by the sea on the south and west. The most probable genesis is that it was the land of ploughshare or the fertile region where agriculture flourished. It is known that through the ages Nāñchināḍ has been famous for its prosperous paddy cultivation.[1]

There is no doubt that Nāñchināḍ was a typical Tamil region of early times. The *Tolkāppiyam* says that Tamiḻagam

1. In verses 137 and 139 of the *Puṟanānūṟu*, Oruchirai Periyanār and Marudan Iḷanāganār respectively refer to the remarkable richness of the soil.

extended from Vaḍa Vēṅkaḍam down to Tenkumari, which is the southernmost extremity of Nāñchināḍ. The Maduraikkāñchi (lines 70–72) also speaks of the same boundaries of Tamiḷagam. Adankōṭṭu Āśān, probably the teacher of Tolkāppiyar, was a native of Tiruvitāṅkōḍu, on the western border of Nañchināḍu.

The Pāṇḍyas were the time-honoured rulers of this region. The Divākaram speaks of the Pāṇḍyan king as 'Kumari Chērpan' or the lord of Kumari. The goddess, Kumari, was in fact revered as the family deity of Pāṇḍyan Kings. (தென்னவர் தம் குலதெய்வம் தென்குமரி).

But in the Śaṅgam age itself Kumari Nāḍu was occasionally captured by the Cheras, as may be seen from the *Puṛanānūṛu* (17) and the *Padiṛṛuppattu* (11) and (43). It would appear that as early as the Śaṅgam epoch, Nāñchināḍ had become the bone of contention between these two powers.

We hear of a chieftain Nāñchil Porunan in northern Nāñchināḍ. Some verses (137, 138, 139, 140 and 380) of the *Puṛanānūṛu* anthology speak of him and his generosity. He was very probably a vassal of the Pāṇḍyan king, because the verse 380 of the *Pūṛanānūṛu* describes him as 'Tennavar Vayamaṛavan', and it is well known that 'Tennavar' denoted the Pāṇḍya.[2]

Little is known about the later history of Nāñchil Porunan's dynasty. Perhaps it became extinct after the defeat at Talayā-laṅkānam or it was subdued and exterminated by one of the Pāṇḍya monarchs of the First Empire. However, there is little doubt that before the 7th century A.D., northern Nāñchināḍ had passed into the hands of the Imperial Pāṇḍyas. This conclusion is reinforced by the fact that the Pāṇḍya monarchs of a later date like Raṇadhīra and Jaṭila Parāntaka who waged frequent wars in the land of the Āyis are not known to have fought even a single battle in northern Nāñchināḍ.

Meanwhile, to add to the political confusion of Nāñchināḍ, the Āys entered the field and held sway over the western part

2. Mahamahopadhyaya U. V. Swaminatha Aiyar thinks that Nāñchil Porunan was a vassal of the Chera; but the description 'Tennavar Vayamaṛavan' makes it clear that the suzerain was the Pāṇḍya.

of the region. This is learnt from Ptolemy's account. The Periplus of the Erythraen Sea, compiled some time between A. D. 81 and 96, states that the land south of Nelcyṇḍa (in Central Travancore) up to Komari formed part of the Pāṇḍyan Kingdom.[3] But Ptolemy who compiled his 'Geography' about A. D. 140 states that to the south of the Chera kingdom there flourished the territory of the Ayis extending from Melkyṇḍa, obviously identical with Nelcyṇḍa of the Periplus, to Komaria, and that it was only past Komaria that the Pāṇḍyan kingdom lay.[4] This indicates that the Ayis had deprived the Pandyas of the land stretching from Nelcyṇḍa to Komari some time between A. D. 96 and 140. Perhaps it was Ay Aṇḍiran, about whose prowess the *Puṛanāṇūṛu* presents a glowing picture, who drove away the Pāṇḍyas from that region.

In all probability, Titiyan, described as Potiyir Chelvan by the poet king, Bhūtappāṇḍyan, was a successor of Āy Aṇḍiran. There is a blank in the history of the Āyis after the period of Potiyir Chelvan. But, since they appear again in the history of the 8th century A. D., it is likely that during the intervening period, the Ayis had been reduced to the position of local chieftains, probably by the Cheras in the north. Beginning from the 8th century A. D., the Āy rulers had their seat of power near Tiruviḍaikkōḍu in Kuṛunāḍu adjoining Nāñchināḍ; therefore, it seems that they had been expelled from the Podiyil Hills to this locality. During the later period of the Āy history in the West Coast, their rule extended over Nāñchināḍ, or at any rate over the major part of it.

But the Pāṇḍyas had not reconciled themselves to the loss of Nāñchināḍ. This is evident from the frequent Pāṇḍyan attacks on Kōṭṭār. The Pāṇḍyan incursions resulted in their conflicts with the Āyis on the one hand and with the Cheras on the other. The *Pāṇḍikkōvai* states that Arikēsari Māravarman known as Nedumāran (of the 7th century A. D.), a contemporary of Tirujnānasambandar, fought against the Chera king at Viliñam and Kōṭṭār. The *Pāṇḍikkōvai* adds (verse 239)

3. McCrindle: *Indian Antiquary*, Vol. VIII, p. 145.

4. McCrindle: *Indian Antiquary*, Vol. XIII, p. 329.

that Neḍumāran vanquished the Chera and captured his southern dominion. But it was not a lasting victory. The Pāṇḍyas of the First Empire frequently attacked Nāñchināḍ. Jaṭila Parāntaka (c. A. D. 765–815) attacked the Āy Vēḷ king in Kuṛunāḍu and won a victory over him destroying Viḻiñam. On his way to Viḻiñam, he must have captured Nāñchināḍ. Later, Vīranārayaṇa Chadayan who ascended the throne about A. D. 880 was actively connected with Nāñchināḍ. Some of the early Pāṇḍyan inscriptions in S'uchīndram belong to his reign. Vīranāyaṇaśśēri and Vīranārāyaṇamaṅgalam, two villages located within a few miles of Kōṭṭār, perhaps owe their names to this Pāṇḍya sovereign.

With the rise of the Imperial Chola power under Rāja Rāja I the Chola invasions of Nāñchināḍ were frequent. Inscriptions of Rāja Rāja I are found in Dars'anamkōpe, Śuchīndram and other places in Nāñchināḍ which show that he had extended Chola authority over it. He marched farther westward and captured Viḻiñam and Kāndaḷūr which lay to the west of Nāñchināḍ. But Rāja Rāja did not have the time to organize all these conquered territories as part of his empire. This was left to Rājēndra I who founded the Chola-Pāṇḍya Viceregal system and Nāñchināḍ was also brought under this scheme.

But the Chola hold over Nāñchināḍ seems to have weakened towards the closing years of Kulōttuṅga I's rule (A. D. 1070–1120). The later Cholas were involved in troubles nearer home and they did not have time to turn their attention to Nāñchināḍ. This situation was taken advantage of by the Vēṇāḍ kings. Kōda Varma (c. A. D. 1102–1125) the ruler of Vēṇāḍ seems to have established his authority over parts of Nāñchināḍ. Vīra Kēraḷa, his successor, designated Śuchīndram as Vīra Kēraḷa Chaturvēdimaṅgalam. It is important to notice in this connection that the lands he gifted to the temple at Śuchīndram lay in different villages such as Kaḷakkāḍ, Tiruvaḷanallūr and Tenkumputūr, all in Nāñchināḍ. It is also significant that the inscription which records this grant is dated in the Kollam Era. This shows that the supremacy of Vēṇāḍ over some part of Nāñchināḍ was established during his reign. Further, Vīra Kerala's inscription of 302 M. E. (A. D. 1117) at Cholapuram, making over the tax

from Vaḍaśśēri as a gift to the temple at Rājēndrachōḷēśvaram substantitates it.

However, the Pāṇḍyas did not accept the Vēṇāḍ supremacy over Nāñchināḍ without a struggle. Conflicts between the Pāṇḍyan kings and Vēṇāḍ rulers appeared on the question of supremacy over Nāñchināḍ. Perhaps this is the explanation to be offered for the inscription in S'uchīndram of Māravarman Śrī Vallabha, which, on palaeographic grounds is assignable to the 12th century A. D. Eventually however, Vēṇāḍ triumphed. Following Vīra Kēraḷa, other Vēṇāḍ kings like Kōda Kēraḷa Varma, Śrī Vīra Ravi Varma and Udayamārtāṇḍa Varma continued to entrench their power. Occasional incursions of the Pāṇḍyas, as under Parākrama Pāṇḍya in 1357 did not lead to the collapse of the Vēṇāḍ power in Nāñchināḍ.

The invasion of Nāñchināḍ by Vijayanagar led to the defeat of the Vēṇāḍ king.[5] But Nāñchināḍ was not organized by the Vijayanagar empire. Later, the Nayaks of Madurai invaded Nāñchināḍ and were responsible for confusion and suffering of the people.[6]

The modern era in the history of Nāñchināḍ began with the reign of Bāla Mārtāṇḍa Varma (1729–58), the maker of modern Travancore. His successors ruled Nāñchināḍ till the reorganization of States was effected in 1956 and Nāñchināḍ was incorporated in the Tamil Nadu.

The Nāñchināḍ Veḷḷaḷas have been the most dominant people of the region over the years. According to the Census of 1901 the total number of Nāñchināḍ Veḷḷāḷas was 18,203; the latest Census shows that the number has risen to 40,136. Though they concentrate in the two taluks of Nāñchināḍ, some have settled down in North Travancore, Madras city and other places and towns of Tamil Nadu.

As mentioned earlier, the Nāñchināḍ Veḷḷāḷas have mostly the characteristics of the Tamil or Pāṇḍy Veḷḷalas of the Madurai

5. For details see K. K. Pillay: *The Śucīndra Temple*, pp. 39.44.

. Ibid pp. 44-9.

and Tirunelveli Districts and at the same time some features of the typical Malayāḷi social customs. In fact they originally belonged to the Tamil region. As Nāgam Aiya states in his *Travancore State Manual*: 'Emigrants from Pāṇḍy settled in Nāñchināḍ from time to time and the absence of any permanent habitation of the Malayāḷis in Nāñchināḍ confirms the fact that it has been colonised solely by people from the Coromandel Coast.[7] There has been a persistent tradition that the Veḷḷāḷas were immigrants from regions to the east of Āralvāymoḻi, which is on the border of the Tirunelveli District. The tradition current among the people of Nāñchināḍ is that several families of Veḷḷāḷas were invited from Madurai, Tirunelveli and other Districts of Tamiḻagam to settle down in Nāñchināḍ in order that their services might be utilised for the maintenance of accounts in the Civil and Military Departments of the ancient Chera kingdom. Even to this day, the men of many prominent families of the Nāñchināḍ Veḷḷāḷas have the prefix 'Kaṇakku' attached to their names.

It is significant that most of the Nāñchināḍ Veḷḷāḷas, have their ancestral family temples in the Districts of Tirunelveli and Madurai. Distant relatives of several Nāñchināḍ Veḷḷāḷas are still found in the neighbouring Tirunelveli district. The personal names current among the Nāñchināḍ Veḷḷāḷas clearly show that they are similar to those common in Tamil Nadu and, have little affinity with those in Kerala. Names such as Kanakasabhapathi, Subramanian Ponnambalam, Desikavinayakam, Muthuswami, and Kuttalalingam are among the popular names. They have all the suffix Pillai, which, however is common in Tamil Nadu as also in South Kerala.[8]

It need hardly be added that the language spoken by the Nāñchināḍians is Tamil, though as a consequence of their contact with the Malayalam Government of Travancore, certain Malayalam words and expressions have crept into the texture of their spoken language. Some outstanding poets like Kavimani Desikavainayakam Pillai and Seykuttambi

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7. V. Nagam Aiya: *The Travancore State Manual*, Vol. II. p. 373.

8. The suffix 'Pillai' is now used by not only Vellalas but by several other non-brahmin castes, as well.

Pavalar, have flourished in modern Nāñchinād. Several writers of Tamil Prose have also enriched the language.

Moreove the characteristics and the format of the villages in Nāñchinād resemble those of the typical village of Tamil Nad. The Nāñchinādians having been pre-eminently agriculturists, live grouped together in villages situated in the vicinity of their paddy fields. The houses are built in streets unlike those of the Malayālis who live in isolated homesteads. The Nāñchinād Veḷḷāḷas had until very recently a village organisation of their own, with office bearers such as Dharma Kartā or trustee, the Mudalpaḍi or treasurer and the Kaṇakkan or accountant, and the management of the village common fund was entrusted to them. Every village has one or two temples with rich endowments. The Nāñchinād village, like the rest of the villages in Tamil Nadu, has been a self-sufficient unit, with its own carpenters, blacksmiths, shepherds, barbers and washer-men, as well as its own masons and potters.

Disputes and law suits among the people of the village were in the past settled in the village court of arbitration, by the Mūttapiḷḷais and Karayāḷans (the leading landowners) who were the chief men of the village. Till A. D. 1810 it was the Ambalakkārs, accountants attached to temples, who collected the revenue and passed it on to the Government Treasury.

At times the leading people from each Piḍāgai (local division) of Nāñchinād, met at appointed places and they considered questions of political importance. These assemblies were known as Nāṭṭukkūṭṭams. Grievances of the people were voiced and resolutions were passed in them. The Mudaliyār Manuscripts found in the house of the Periyavīṭṭu Mudaliyār of Aḷagiapāṇḍipuram[9] contain a record of the resolutions

9. The earliest Periyavīṭṭu Mudaliyār is said to have been a minister of Nāñchikkuṟavan, a local chieftain. When Nāñchikkuṟavan made an audacious bid for the hand of the Mudaliyār's daughter in marriage, the Mudaliyār adopted a strategem and brought about the death of Nāñchikkuṟavan. This is an incredible story. However, Periyavīṭṭu Mudaliyār was a trusted official in the days of Pandyan supremacy and, later he was the chief leader of the people.

passed in the Nāṭukkūṭṭams. Some of the resolutions, refer to the tyranny of local officials, the consequent decision of the people to leave their lands uncultivated and desert the place and proceed to the east of the (Aramboly) hills. For instance, in 898 M.E. (A.D. 1702) the resolution passed at Kaḍukkarai, speaks of this kind of civil disobedience. The havoc caused to the people of Nāñchināḍ by the Nāyak invasions and the determination of the citizens to devise measures for corporate action are recorded in several resolutions. The spirit of sturdy independence evinced by the people of Nāñchināḍ is remarkable.

Religion: The Nāñchināḍ Veḷḷāḷas are all Śaivites, though they are not opposed to the worship of Vishṇu. Their high priest is the Umayorubhāgom Gurukkal of Srivaikuntam. They wear holy ashes and commonly have three horizontal lines with holy ash on the forehead and arms. This practice is rarely adopted by the educated youths of the present.

Some of the Nāñchināḍ Veḷḷāḷas are pure vegetarians, while others are meat eaters. But among the Nāñchināḍ Veḷḷāḷas this is not a barrier which stands in the way of interdining or intermarriage. The matter of abstinence from animal food, does not create any division in the community, though some individual vegetarians have sentimental objection to dine with the non-vegetarians.

There was, until recently, the practice of having the *Dīksha* or the religious initiation in groups by Gurukkals, well versed in hymns and incantations. Those of a group who are initiated at the same time and under the same Gurukkal developed a fellow feeling. They constituted a brotherhood known as *Santāna Piṛavi*. At the time of initiation, they pledged themselves solemnly to look upon one another as brothers during the whole of their life time. They attended ceremonies in each other's house and rendered mutual help at times of need. They even observed pollution for three days, on the death of any one of the members of the fraternity. In recent times, the practice of having the *Dīksha* is rarely adopted.

The Nāñchināḍ Veḷḷāḷas, like other non-brahmin communities, worship dieties like Māḍan, Inan, Iśakki and Māriammam.

Besides daily pūjas offered to these deities, certain periodic festivities and ceremonies were held. They are known as 'Chirappu' while grand annual festivals are spoken of as 'Koḍai'. These 'Pēykkoḍais' and 'Ammankoḍais' were celebrated with great enthusiasm and at considerable expense. Animal sacrifices were offered on such occasions. Some persons used to get excited and, indulge in frantic utterances and behaviour as if possessed. These practices are becoming gradually obsolete.

The worship of Māḍan, Iśakki and other deities of the kind, was probably the vestige adopted from the primitive tribes of the place.

The Nāñchināḍ Veḷḷāḷas celebrate typical Tamil festivals, like the Poṅgal, Dīpāvaḷi and religious observances like Śivarātri, Vināyaka Chaturti and Saraswati Pūja and Krishna Jayanti. The elders eschew the usual meals at nights of the Full Moon, New Moon and the last Friday of each month according to the Hindu calendar. In recent times, these observances have become obsolete among the educated youths.

Dress: The dress commonly worn by the Nāñchināḍ Veḷḷāḷas in the villages is simple. A four cubit cloth is tied around the waist and a towel over the shoulders constitute the normal dress. On occasions, the towel is replaced by a long upper cloth. In the pattern of dress there is resemblance between the Nāñchināḍ Veḷḷāḷa and Nāyar men. The Pāṇḍy Veḷḷāḷas do not differ radically from the Nāñchināḍ Veḷḷāḷas, though they take more commonly to the eight cubit cloth with coloured borders. In recent times, the practice of covering the body with a light tunic has become common.

The dress of the Nāñchināḍ Veḷḷāḷa women, shows a marked contrast with those adopted by their Nāyar counterparts. The Nāñchināḍ women have costumes, resembling those of the women of the Tirunelveli and Madurai districts. The Nāñchināḍ woman wears coloured clothes (sarees), seven or eight yards long. She gathers up a few folds of this cloth into a bunch on her right side. This is entirely different from the traditional dress of the Nayar woman, who wears a short white cloth round her loins and has

either a small jacket covering her breasts or often no cover at all. On the other hand, white cloth is associated with widowhood in Nāñchināḍ and the rest of Tamilnad. It may, however, be mentioned that in recent times Nāyar and other West coast women have begun to wear coloured sarees and blouses.

Ornaments: The ornaments worn by men were but a few; some used to have ear ornaments, Kaḍukkans, as they were called. These were gold rings set with a precious stone on each. They were fixed to the ear through a hole in the ear lobe. Some men used to have a cord of silver or gold around the waist. Women, on the other hand, had numerous ornaments, the prominent among which are specified below:

(1) *Pāmpaḍam*—ear ornament of gold worn on elongated earlobes.

(2) *Koppu*—ear ornaments of gold worn alongside with pāmpaḍam.

(3) *Sūriyappirai* and *Chandirappirai*—and other ornaments worn on the head.

(4) *Tāli, Sutturuvu Śavadi, Villaimālai* and other neck ornaments. Of these Tāli and Sutturuvu are worn by even the lower middle class people.

(5) *Kaḍayam, Chandukkāṛai, Muḍuku, Kāppu* and other wrist ornaments.

and

(6) *Pādakam, Taṇḍai, Kōṇattaddai* and other ornaments for the ankle.[10]

Most of these have gone out of vogue at present. Only the *Tāli* and bangles with the *Śutturuvu*, still lingering among the elder women, are common. The *Tāli* is the most sacred of the ornaments. Until her husband dies, a married woman must wear the *Tāli*. There is a saying that the *Tāli* and *Pīli* belong to the

10. I am indebted to these and other details regarding the Nanchinad Vellalas to Kavimani S. Desikavinayakam Pillai. See his article on *The Nanchinaḍ Veḷḷaḷas, The Malabar Quarterly Review*, Vol. VIII, September 1909, No. 3 pp. 259 to 278.

husband. Now-a-days this does not apply to the *Pīli* or the silver ornament worn on the toes; it is discarded in modern times. The *Tāli* of a Nāñchināḍ woman resembles that of a Pāṇḍi Veḷḷāḷa woman both in shape and size and, is very different from Nāyar woman's *Tāli* (called other wise as *Minu*) which is of a peculiar form. The Nāyar woman is indifferent about wearing it; often she is found without it.

The Nāñchināḍ Veḷḷāḷa uses turmeric paste over the face, the tāli and the neck. The turmeric paste is also used by the girl before marriage and, during the period of her wedded life. The moment she becomes a widow, it is discarded.

Matrilineal System: The distinctive feature which marked out the Nāñchināḍ Veḷḷāḷa from the Pāṇḍy Veḷḷāḷa was the adoption of the matrilineal system of inheritance. Why and when did the Nāñchināḍ Veḷḷāḷas become Marumakkattāyis and adopt the matrilineal system of inheritance? There is a tradition that one Nāñchikkuṛuvan was once ruling over a part of Nāñchināḍ and, during the reign of one of his immediate successors the Veḷḷāḷas were eager to put an end to the Kuṛava rule. With that object, they sought the protection of the neighbouring Travancore king and, adopted the Marumakkattāyam law of their new master as a token of their loyalty. This tradition is historically unsound, because the Marumakkattāyam system of inheritance was adopted by the Travancore ruler himself only, after the 11th century A. D.; Nāñchikkuravan is said to have ruled in Nāñchināḍ very much earlier.

The history of Kerala, as learnt from foreign writers and from internal evidence furnished by epigraphy shows that matriliny appeared only some time between the 11th and 12th centuries A. D. Evolving out of the Nambūdiri custom of the eldest son alone marrying from his community, the practice of the Nambūdiri male members of a family consorting with Kshatriya or Nāyar women appeared. Later, the Chera ruler of the second Chera empire, ruling at Mahōdayapuram, accepted the new system and other rulers of Kerala followed the path of the emperor.[11] With the zeal of new converts, the rulers

11. That the Chera-Chola war of the 11th century and the consequent rise of suicide squads in Kerala was the principal factor responsible

of Kerala seem to have induced various people to adopt Marumakkattāyam.

Nagam Aiya, in his *Travancore State Manual,* gives the following account:

"There was once a dispute as to the sovereignty of Nāñchināḍ between the Pāṇḍyan and the Travancore kings; it was contended by the Pāṇḍyan kings that the whole of Nāñchināḍ was under his sway, that a dam that had been constructed across the Paraḷiyār with feeding channels for irrigating the paddy fields went by the name of Pāṇḍyan Aṇai in memory of the king who constructed it, that the king of Travancore and his subjects were Marumakkattāyis, the the inhabitants of Nāñchināḍ were Makkattāyis like the Pāṇḍy people and for these reasons, the sovereign right vested in him. This contention was opposed by the Travancore king, who argued that the inhabitants were Marumakkattāyis, that the Pāṇḍyan dam was constructed by the Travancore Government, that with a view to perpetuate the memory of the Pāṇḍyan king who was in sincere intimacy with his contemporary king of Travancore, the dam was called by that name and that, as the land where the dam stands is indisputably included in the Travancore territory, permission could not have been granted to construct it for the benefit of an alien sovereign. The dam was soon after destroyed and made unserviceable. The Nāñchinādians deposed to their having become Travancore subjects and their ancestors having adopted the Travancore law of succession, viz. the Marumakkattāyam law. They did not desire to be the subjects of the Pāṇḍyan king or follow the Makkattāyam law of inheritance. To this effect they made a solemn statement in the Madura temple.

In the manuscript records in the Padmānabhasvāmy temple at Trivandrum, it is stated that this happened in 282 M. E. (A. D. 1106)."

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for the advent of Marumakkattāyam, is a view held by Elamkulam Kunjan Pillai. But it was not the principal cause; it contributed to strengthen the move. On the other hand, the Nambudiri landlords had become powerful and they wanted to perpetuate their hereditary holdings. Their hold on the Kerala emperor was great, as may be seen from the Ramesvarattu Koil inscription of Quilon (A.D.1102). They must have persuaded the emperor to adopt Marumakkattāyam.

In this connection it may be noted that a popular ballad recounts the capture of Nāñchinād by the Vénād ruler. It runs as follows:

"எத்திசையும் புகழ்படைத்த கொல்லம் தோன்றி
இருநூற்றி தொண்ணூற்றிரண்டாமாண்டு
வெற்றி செய்யும் கும்பத்தில் வியாழமின்ற விளங்கு
திங்களாவணி பன்னொன்றாந் தேதி
தத்தி விழும் பரளியாற்றணையுந் தண்ணீத் தமிழ்பாண்டி
ராஜசிங்கன்றனையும் வென்று
கொத்தலரும் பூஞ்சோலை நாஞ்சிநாடும் கோட்டா
றும் கூபகர் கோன் கொண்டவாறே."

There is a difference of ten years between the dates mentioned in the popular song and the Padmanābhasvāmy Temple record. In any case the incident of the capture of Nāñchinād by the Vēnād ruler (called here the Kūpaka king) is mentioned by both the sources. According to the present reckoning, the Vēnād ruler of this time was Kōda Varma (c. A. D. 1102–1125), the successor of Rāma Varma Kulaśēkhara, who was the founder of the Vēnād royal house. This is probable because, Vīra Kerala, the successor of Kōda Varma as noticed earlier, made a gift to the temple at Śuchindram which place itself was described as 'Vīra Kérala Chaturvedimangalam.' It would therefore seem that Marumakkattāyam was introduced among the Nāñchinād Veḷḷāḷas by Kōda Varma either in A. D. 1106 or 1116.

According to Marumakkattāyam, the property descended to one's sister and her children. The question arises whether with the advent of the Marumakkattāyam system of inheritance, widow remarriage was also introduced among the Nāñchinad Veḷḷāḷas. There is no record which proves this. But it is very likely that, soon after the introduction of the Marumakkattāyam, the custom of widow marriage was adopted. It is stated by Kavimani S. Dēsikavināyakam Pillai that "as soon as they returned from Madura after taking the solemn oath in the temple there, a general conference was held of the Nāṭṭārs and in it widow remarriage was declared permissible from that time forward." What the basis of this statement is it is not known.

However, it need hardly be mentioned that this was a healthy social change. It must be remembered that remarriage among Nāñchinaḍians is generally resorted to only in hard cases, where the widow is of young age. There came about a convention that widow remarriage does not occur in families of high status. It must be mentioned that the children born of the second marriage of the woman, are not entitled to perform the funeral rites or death ceremonies of the father. Moreover, the remarriage of a widow, was not attended with the formalities associated with the usual marriage. The widow remarriage was called a 'sambandam' or cloth-giving ceremony when the man bestowed on the widow a new cloth. The festivity and gaiety found in the marriage are not found, though there would be a feast on a modest scale.

There arose also the practice of a widower marrying a virgin by 'cloth giving' and not by celebrating a formal marriage. This was largely dictated by considerations of economy. However, this too was known as 'Sambandam.'

At times before the Sambandam takes place an Yeḍuppu deed was executed in favour of the wife through the Sambandam by the husband in accordance with the terms of an arrangement they have come to. The Yeḍuppu deed is really in the form of a contract. By this, the husband binds himself to pay the wife a certain sum of money as remuneration on his death, provided the latter continued to live with him and, till she died or resorted to a divorce of her own accord. However, she was more than a concubine, since her children also could claim Ukantuḍamai right or a share of the father's property.

When a wife was alive, occasionally a man took to another by contracting a Sambandam. This led to domestic disruption and unpleasant family life. Moreover, after the death of the man, disputes over the property of the deceased person ensued. There have been instances of a man entering into Sambandam relationship with more than one woman, even when the first wife was alive. Obviously, it was an unwholesome social evil. By the Nāñchinaḍ Veḷḷāḷa Regulation of 1926 these kinds of polygamous arrangments, were declared unlawful and strict monogamy was introduced.

Divorces, too, could be effected on account of incompatibility of temperament or other circumstances. Usually an informal Pañchāyat, consisting of their relations or friends and prominent men of the village, considers the question and decides, whether or not the divorce should be effected. If the divorce is approved, a release-deed or *Viḍumuri* is granted and attested by the Pañchāyat. Then the woman was entitled to enter into marital relationship with another by 'receiving cloth' from him. But it must be added, that the choice was not made by the woman of her free will. Invariably her parents, brothers or other relatives made the choice and the new alliance took place thereafter.

Marriage: Far different and more formal, is the regular marriage. The preliminaries to the marriage, as well as the marriage celebration itself, are similar to those of the Pāṇḍy Veḷḷāḷas. Negotiations between the parties through friends and near relatives mark the beginning of the settlement of marriage. The social and economic positions of the parties play a large part in the settlement of the match. The gōtra is not taken into consideration. When the alliance is fixed in consultation with the astrologer, there is a formal exchange of turmeric between the leading relatives of the bride and bridegroom. At times, the exchange of turmeric takes place on the day of betrothal; in many cases it precedes the betrothal.

The betrothal ceremony was once a fairly expensive celebration. Friends and relatives and neighbours are all invited to the bride's house, where usually the marriage also takes place. The brahmin priest plays a prominent role. Before a lighted lamp, an overflowing measure of paddy and an image of Ganēśa, the astrologer reads out the details of the proposed alliance and of the celebrations that are to follow. The matter is set forth in a cadjan leaf over which turmeric is smeared later. The cadjan leaf, after its contents are read out, is handed over by the astrologer to the bridegroom's father who passes it on to the father of the bride. The bride is dressed in a new cloth usually a silk saree brought by the bridegroom's party. The bride does not come out of her room in the house. The womenfolk decorate her with ornaments and bless her.

On the marriage day, which invariably falls a few days after the betrothal, the bridegroom's party arrives in state, at the fixed time. The bride's brother receives the bridegroom, washes his feet at the entrance. The bridegroom presents him with a golden ring. Should there be no brother of the bride, a cousin officiates in his place. It is the bride's brother or cousin who formally leads the bridegroom into the house and, thereafter to the marriage dais and back.

The ceremony takes place according to the religious rites prescribed in the Śāstras. Generally a brahmin priest officiates at the ceremony.[12] On the raised platform or the marriage dais, already provided at a suitable place in front of the house, a sacred fire is ignited and kept burning as a witness to the marriage. By the side of the fire, a large plantain leaf is spread on which a measure overflowing with paddy is kept. A representation of Gaṇapati shaped out of clay or a symbolic representation made of cowdung is placed on the leaf.

The bridegroom is led to the dais. Then the bride, fully decorated with jewels and the new cloth presented by the bridegroom, is taken to the dais by the sister of the bridegroom. The usual hymns are chanted by the priest. Then the father of the girl makes a gift of the bride to the bridegroom, and by way of formal confirmation, pours water into the right hand of the bridegroom repeating certain hymns uttered by the priest and making a declaration that he would fulfil promises of providing the couple with all the requirements for leading a prosperous life. This pledge is essentially conventional.

The most important part of the marriage ceremony follows. This is the tying of the sacred *Tāli* or the marriage symbol. This is done by the bridegroom assisted by his sister. All the time,

12. On occasions of marriage one has to undergo all the 16 prescribed formal ceremonies from the time of conception to the time of the thread-wearing ceremony. Moreover, the Veḷḷāḷa has to wear the holy thread in religious ceremonies and observances. V. Nāgam Aiya, Travancore State Manual, Vol, II. p. 378.

In recent times in several marriages actuated by reformist ideas, the priest does not play any part. In such cases, after the tying of the *tāli* or the sacred marriage symbol, short speeches blessing the couple by leading men follow.

the piper and party play on their instruments. The bridegroom's sister takes off one of the garlands worn by the bridegroom and puts it around the bride's neck. This is followed by the bridegroom himself taking off one garland from his neck and, putting it around the bride's. The bride responds by taking one of her garlands and donning the bridegroom with it,

Then the bridegroom, holding the right hand of the bride in his left, walks around the dais thrice and, then they retire to their separate apartments in the house. After a time, joyous entertainments like the bridegroom and bride swinging to and fro on a plank, fastened to ropes, appear. A feast for the visitors and guests follows. At an auspicious time, either on the day of marriage or later fixed by the astrologer, the bride serves food to the bridegroom.

Sometime after the marriage, at the appropriate time prescribed by the astrologer, the bride and bridegroom after bath are led to the dais. This is supposed to represent the 4th day of the marriage. Some formal ceremonies are conducted at the dais ; a presentation of new clothes is made to the bridal party. A small gift of money is given to the bridegroom. This is known as the Śuruḷ (gift of money) on the occasion of the bath supposed to mark the 4th day of the marriage. (நாலாம் நீர் சுருள்).

On the 2nd day of the marriage, the bride and bridegroom should sow seeds of paddy, peas and other cereals, altogether amounting to nine varieties, in three or seven earthern ware receptacles. On the 7th day the germinated seeds are taken to the adjoining pond or river and dropped into the water. The germination of the seeds is supposed to symbolise the birth of children to the newly wedded couple.

On the morning following the day of the marriage, the bride and bridegroom after a bath are led to the dais. Certain rituals follow which are supposed to represent the 7th day after marriage. A gift of money is made to the bridegroom. Before bride and bridegroom get out of the dais, they spill some coloured water on each other's clothes. This light-hearted frolic is supposed to remove the coyness of the bride. However, this is followed by

youngsters and certain other relatives of the bridal party in throwing coloured water on each other. This is almost an obsolete custom now.

The marriage ceremony is supposed to last for seven days, but now it is reduced to a single day or two days at the most.

Associated with the ceremony, on the morning following the day of marriage there is a significant ceremony described as 'Ammi midittu Arundhati Kāṇal' (அம்மி மிதித்து அருந்ததி காணல்). The bridal couple tread on the grinding stone of the house and look up at the sky and are supposed to see Arundhati, the paragon of chastity. The grinding stone is supposed to represent Ahalya, the wife of Gautama Rishi. The traditional story is that Ahalya was seduced by Indra. The moral of this ceremony is, that it holds up the ideal of the chaste Arundhati and condemn the accursed Ahalya.

Within a few days after the marriage, the new couple proceeds with relatives and friends to the bridegroom's house where they are received warmly. A feast follows.

The ceremonies connected with the marriage of a Nāñchināḍ Veḷḷāḷa are similar to those of the marriages of Pāndy Veḷḷāḷas and the Tamils in general. It is entirely different from that of a Nāyar or any Malayāli pattern of marriage. Sometimes intermarriages between Nāñchināḍ Veḷḷāḷas and Pāndy Veḷḷāḷas take place,[13] though they are not common. It need hardly be mentioned that members of the two communities have always freely interdined with one another. Śaiva Veḷḷāḷar or those who were orthodox vegetarians, invariably refrained from dining with Nāñchināḍ Veḷḷāḷas and the Pāṇḍy Veḷḷāḷas.

Ukantuḍamai: A peculiar system of inheriting a share of the father's property was in vogue among the Nāñchināḍ Veḷḷāḷas before 1926. The share of the property inherited by the children of a Nāñchināḍ Veḷḷāḷa father, was known as Ukantudamai. This share of the children was in addition to what they inherit from the mother's line through the matrilinear right.

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13. Towards the end of the last century a Méleluthuppillai a high financial officer of Travancore, who was a Pāndy Veḷḷāḷa married a Nāñchināḍ Veḷḷāḷa girl of a respectable family at Thérur, near Nāgercoil.

The Ukantuḍamai was prevalent only among the Nāñchināḍ Veḷḷāḷas; it was not found among the Nāyars or other Marumakkattāyis; nor was there any need for it among the Makkattāyis, because the children inherit the entire property between them. The Ukantuḍamai right is a true tell-tale of the past history of the Nāñchināḍians. Justice Chellappa Pillai of the Travancore High Court in his judgement on a suit for Ukantuḍamai, makes the following observations in respect of the history of Nāñchināḍ Veḷḷāḷas. "They are a peculiar class of people. They originally followed the Makkattāyam Law and with it, the manners and customs of those people who followed that Law. But emigrating into a country where the Marumakkattāyam prevailed, they gradually imbibed the manners and customs of the people of their land of adoption, till they became to all intents and purposes followers of Marumakkattāyam Law. The Nāñchināḍians are not complete Marumakkattāyees. They, in this adoption of the Marumakkattāyam Law, did not relinquish their claim to the father's property altogether. The son of a Nāñchināḍian begotten as he is, of his wedded wife and bound to perform his funeral rites, stands in a very different position from that of an ordinary follower of Marumakkattāyam Law. He is legally entitled to a share of his father's possessions (family or self-acquired) after the death of the latter and, not before that event. The statement made in the Census Report of Travancore for 1901, that it is a further rule that in the case of a divorce, the wife and children should be given this Ukantudamai (உகந்துடமை) at the time of her (wife's) separation is wrong and, cannot be supported by a single instance, the death day of the father being the birthday of the son's right of Ukantuḍamai (உகந்துடமை). This right will not be taken away by the absence of the male issue. It is claimable, both by male and female children of the deceased and the assets available for Ukantuḍamai (உகந்துடமை) are to be divided among them equally. If a Nāñchināḍian has more than one wife and, also children by all of them his family property does not stand liable to be charged with as many Ukantuḍamai (உகந்துடமை) as there are wives. Only one Ukantuḍamai (உகந்துடமை) can be claimed on account of one member out of his Taravad property and, that is subject to a division according to the number of wives a particular man has."[14]

14. S. Desikavināyakam Pillai: '*The Nāñchinad Veḷḷāḷas*': *The Malabar Quarterly Review*, Sept. 1909 No. 3, pp. 271-3.

Ukantuḍamai, is thus a relic of the Makkattāyi system of inheritance. A man's property inherited by Marumakkattāyam i.e. the matrilineal system of inheritance from his mother or uncle, would pass on to his sisters and their children. But his self-acquired property will be divided among his children through the Ukantuḍamai right.

However, there had arisen frequent disputes and cases of litigātion in the settlement of the Ukantuḍamai claims. Attempts on the part of Seshakār or the nephews of the deceased to nullify or filter down the Ukantuḍamai claims, were frequent. Public opinion, as well as the decisions of the court of law safeguard the rights of the son to inherit the father's property. The observations made in a case in the Nagercoil District Court are well worth quotation. "Ukantuḍamai is an indefeasible, filial inheritance of legitimate children, among people who follow the direct line and indeed of the Seshakārs (sister's children) who follow the indirect course".[15]

It must be added, that a father might settle the Ukantuḍamai claims of his sons during his own life time. If he wants to marry again or if he feels apprehensive of any encroachment of the Ukantuḍamai right of his children, by his nephews or others, he might settle the affair himself. An agreement was enacted to this effect. This was known as the *Yāppia Ukantuḍamai.*

In the case of a childless widow, the husband bequeaths a maintenance allowance which was called *Nankudamai*. If the deceased had more than one wife and, if one of these alone had children and the others not, the Nankuḍamai of the childless widow, will be given out of the Ukantuḍamai portion due to the children.

Thus we find that there was a strange combination of the Makkattāyi and Marumakkattāyi systems of inheritance in vogue among the Nāñchinad Veḷḷāḷas. This marks them out as a group distinct from the Pāndy Vellālas on the one hand and, the Nāyars on the other. But it may be observed that the Makkattāyi element predominates over that of the Marumakkattāyis.

15. O.C. No. 42 of 1049 M.E. (A.D. 1874) Nāgercoil Zillah Court.

However, this curious combination of the two systems of inheritance was unnatural and was responsible for continued misunderstanding and distrust among the members of several families. Quarrels between sisters-in-law were common. What is more, this often resulted in prolonged litigation. It is no exaggeration to state, that the economic position of many a family had been ruined by expensive and vindictive litigation No wonder, that the lands owned by many Nāñchinādians, had either been hypothecated or mortgaged to the money lenders. Consequently, the Nāñchinād Veḷḷāḷas, who were once the rich landed magnates of the place, have been reduced to a low economic position. Though, once noted for their skill in accounting, they have not taken very enthusiastically to higher education in English in a commendable measure.

INTERNATIONAL LAW (WAR) OF THE ANCIENT TAMILS

A. PALANISWAMI, M.L.,
(*Director of Legal Studies, Law College, Madras*).

Introduction.

"Geographical conditions divided Indian History, until the nineteenth century, into three well-marked territorial compartments—

(1) the northern plains, forming the basins of the Indus and Ganges,

(2) the Deccan plateau, lying to the south of the Narmada and to the north of the Krishna and Tungabhadra rivers, and

(3) that far-south, beyond those rivers, comprise the group of Tamil States. Ordinarily, each of these geographical compartments had a distinct, highly complex story of its own."[1] Especially the Tamils who inhabited the far-south among the said three had a well organised system of society and Government, starting from a period earlier than 3000 B.C. up to 3rd century A.D.[2]. The history of the Tamils during the 4th century A.D. to the 6th century A.D. is not clear. Again from the 9th century A.D. to the 13th century A.D. we have the history of the Imperial Cholas. The Dravidian civilisation and the history of the Dravidians were the earliest in India.[3] There is sufficient evidence, as to the trade and commerce between the Tamils and Babylonia[4] (IV millenium B.C.), Egypt[5] (1580–1530) (B.C.),

1. V. A. Smith in his *Oxford History of India*, pp. i-iii.
2. Father Heras: *Proto Indian Mediteranean Culture*, Vol. I.
3. Father Heras on Mohenjo-daro inscriptions edited by Sir John Marshall.
4. Sayce-Hibbert Lectures, pages 136.138.
5. W. H. Scoff's *Periplus*, pp. 61, 153.

China[6] (12th century B.C.) and Rome[7] (1-70 A.D.). Wars were fought,[8] peace made, treaties concluded, envoys sent[9] and goods exchanged in a large measure in this period. It is very remarkable to note that a system of law, that enabled the carrying on of an organised Government, that enabled the international transactions, that enabled the regulation of commerce for over 2,000 years, was not reduced into writing. It still stands as an unexplored law of a forgotten family of nations. Why the whole of the Law of Tamils is an unexplored law of a forgotten Empire? It is true that the sources available for research in this field are very meagre but ample evidence is availabe to prove its existence. With this, it may not be possible to give a full picture with all the rules but however it is possible to present a skeleton.

Be that as it may, we shall try to examine the place of war as an institution adopted and practised by the ancient Tamils. The history of the progress of mankind is usually traced through wars. Western International Law also consisted for its most part rules of warfare till about the beginning of the present century. Here an attempt is made to show that even before the beginning of the Christian era, the early Tamils had a set of well-established and humanised principles for the regulation of the conduct of war. Although, they were not called rules of International Law or the Law of Nations, they were called as the Grammar of war[10] or definitions of envoys and their functions.[11]

Three sovereign and independent States existed from time immemorial in this region.[11a] Considerable relationship and

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6. Scoff's *Periplus*, p. 246.

7. Plini: *Natural History*.

8. See *Puranānūru*, *Pathitrupathu* and *Nedunalvādai*

9. *Puranānūru*, Stanza 57.

10. *Tholkappiam*, Porulathikāram, Rules 59-88.

11. *Thirukkural*, Chapter on *Thoothu*.

11a. Cera, Chola and Pāṇdya.

intercourse existed among them. There was no natural boundary separating the territory of the three.

Differences arose among these three States frequently and they were settled either in accordance with peaceful means or in accordance with coercive methods. I have given these methods and practices followed by the Ancient Tamils as found in the literature belonging to that period but under headings and diplomatic terminologies known to modern interntional law.

Cause for war :

1. *Expansion of territory.*—Expansion of the territory was one of the chief reasons for declaring war.[12] It is still an important motive for war, though the modern age has trained the people guiding the destinies of the States, to express their intention clothed in convenient diplomatic terminologies.

2. *Supremacy.*—Each one of the three Tamil kings tried to subjugate the other two. Early history of the Tamils gives evidence as to the declaration of innumerable wars for this purpose. Modern International Law, though not as a rule but as accepting the existing practice, declares, that the intention to settle the dispute as to who is to be the master of the situation has been one of the motives for hostilities. This mastery motive led each one of the respective rulers of Cera, Chola and Pāndya kingdoms to undertake military compaigns upto the Himalayas and to implant on it his crest. Sangam classics give evidence as to this and to the title of *Imayavaramban* to Ceran Senguttavan's father.

3. *Disappointment in matrimonial alliance.*—When a King was disappointed in a matrimonial alliance, he used to declare war against the country of the girl.[13]

4. *Failure to remit the tribute.*—Whe the vassals faild to remit the usual tribute a war was usually declared.[14] Perhaps

12. *Puram*, Stanza 8.

13. The Siege of Parambu hills by the three kings was also for this reason.

14. War against Kalinga by Kulothunga-I was responsible for this, K.K. 338-340.

this will be classed as an internal action by modern International Law.

5. *For subjugating the buffer State.*—To maintain effective control of frontiers a Sovereign declared war[15] as against the neighbouring States.

6. *Defence.*—Self-Defence was one of the reasons for declaring war.

7. *Enmity.*—Enmity played an important part, as a cause, for the declaration of several wars.

8. *Punisment.*—For punishing a king or kings who showed or exhibited an intention to declare a war against him.[16] This was offensive and not defensive.

9. *For humanitarian purposes.*—For instance, when a portion of his territory was submerged by the sea, for rehabilitating the refugees from the calamity, he declared war against a neighbouring State to acquire territory and make provision for these refugees. In order also to save the people from the tyranny of a neighbouring ruler a State declared war.[17] Recognition of a cause like this for the declaration of war is very interesting to note. Modern international law has no such provision.

10. *For establishing his right.*—Wars were also waged when there was no direct descendent of a deceased king. Since it was to establish his rights it came within the concept of defence[18] of his rights.

11. *Insult.*—Insult was also a cause for the declaration of war.[19]

12. *Protection of smaller States.*—The defence of a small State against the aggression of a big neighbour was also a cause for starting military campaingns. Is this not a practice of the

15. See Dr. Rājmanickam: "*Thamizhaga Atcei*" தமிழக ஆட்சி p. 105.

16. *Puram*, Stanza 72.

17. *Silappathikaram*, *Kathai* 11, II. 19-22.

18. See Devaneyan: "*Pazham Thamizhatchi*" பழந்தமிழாட்சி p. 101.

19. See Ibid. p. 101. See also Seran Senguttuvan's expedition to the North *Silappathikaram*, Kathai 26, II. 9-18.

great powers and forms the basis for the concept of United Nations defence now ?

Kinds of War :

Depending upon the actions at a particular time wars were divided into eight kinds. When a King intended to wage war against another King, he usually sent his warriors to lift the cattle belonging to the enemy State. It was called Vetchi.[21] Resisting this was called Karanthai.[22] Regular war started later on aginst the enemy State. That was given the name of Vanji.[23] Kānji[23a] was the name for opposing this operation. Instituting a siege against a fort was called Uzhinhai.[24] Defending the fort from inside was Nochi.[25] Fight in an open specified space was Thumbai.[26] Success in a war was called as Vagai.[27]

It is very intresting to note that these names refer to flowers. At each one of the specific operations above mentioned the specified flower was worn by the warriors and king. The practice was so usual from time immemorial as to be depicted in Tholkappiam as an indispensable part of the art of war.

There was also a broad division of war into two kinds— Land war and Sea War. Duel was also a kind of war. It is curious to note that in the ancient past, success or defeat was decided on the attainments in a fine art.[28] It may be an oratorical contest, a contest in composing a poem,[29] a dramtic feat,[30] a gambling,[31] a ram fight,[32] or a quail fight.[33]

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21. வெட்சி (Vetchi)
22. கரந்தை (Karantai)
23. வஞ்சி (Vanchi) 23a. காஞ்சி (Kānchi)
24. உழிஞை (Uzhigñai)
25. நொச்சி (Nochi)
26. தும்பை (Thumbai)
27. வாகை (Vāgai)
28. See Devanéyan : "Pazham Thamizhil" p. 102. கலைப்போர் (Kalaippōr)
29. Tirukkural, Stanza, 648—பாட்டன்வேறல்—Pāttan Véral
30. Perundinai, Venba—கூத்தான் வேறல்—Koothān Véral
31. Ibid— சூதான் வேறல்—Sōōthan Véral
32. Tholkappiam, Ilampuranar, p. 115—தகர்ப்போர்—Thakarpore
33. Ibid, p. 105—பூழ்ப்போர்—Poozpore (பூழ்-காடை)

Region of War :

War was localised and fought at a specified place called Pōrkkalam.[34] When they had the time the place was selected. When the forces retreated from this area pell-mell and not in an organised way it meant defeat or end of war.[35]

Belligerents :[36]

All the people fighting were called belligerents. Belligerents included the armed forces, drumbeaters, attenders to the officers, dancers to enthuse them, spies, provision suppliers, cooks, washermen, water-suppliers, blacksmiths[37] and other menials and medical men.

There was also a clear distinction between the Watch and Ward force[38] (Police Force) and regular military forces. The duty of the Watch and Ward men was to see that theft and other petty offences were not committed. Generally it was a hereditary office. For protecting the far off regions, regular Government forces were also maintained,[39] besides forces collected by conscription.

The armed forces and the belligerents :

The idea of the maintenance of a regular army came into existence among the European states only at a recent date, whereas even long before two to three thousand years ago, regular armies were maintained by the Tamil Kings. Military force was treated as one of the six essential elements for a Sovereign.[40] Forces were divided into several divisions and each division had its own name. There were also several sub-divisions. It was customary to divide the forces into four: Elephants, Cavalry,

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34. போர்க்களம் (Battlefield)
35. See *Puranānūru*
36. போரிடுவோர், பொருநர்—Porunar
37. See Dr. Rajamanikam in his "Thamizhaga Ātchi" p. 115
38. காவற்படை Kāvarpadai
39. அரசாங்க நிலைப் படைகள் Arasanga Nilaippadaigal
40. படைகுடி கூழ் அமைச்சு நட்பரண் ஆறும் உடையான்
    அரசருள் ஏறு —Thirukkural

Infantry and Chariots.[41] Infantry was again divided into three kinds, as sword force,[42] bow force[43] and spear and javelin force.[44] Depending upon the service period it was divided as Main force[45] or old force[45a] and paid force.[46] The force belonging to the enemy was called the enemy force.[47] Divisions like Vanguard force,[48] Rear force[49] and Auxiliary force[50] were also there. There was a broad division into Land force and Sea force. The front line of the force was called the flag line.[51] Later Cholas had forces called Territorial Army,[52] Kaikkolappadai[53] and Velaikkarappadai.[54] The duty of the Velaikkarappadai was to protect the King in danger like the President's body guard force at present. Territorial army was used for the security of the State during times of peace.

The organization and maintenance of the army was an art with the Tamils from the times of the First Sangam till at least thirteenth century A. D.[55]

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41. Tholkāppiyam, Purathinai Iyal, Rule 72 and its commentary.
42. வாட்படை — Vātpadai
43. விற்படை — Virpadai
44. வேற்படை — Vérpadai
45. மூலப்படை — Moolappadai
45a. தொல்படை — Tholpadai, See Thirukkural.
46. கூலிப்படை — Koolippadai
47. பகைப்படை — Pakaippadai
48 முன்படை — Munpadai
49 பின்படை — Pinpadai
50. துணைப்படை — Thunaippadai See also Devanéyan; *Patham Thamizhatchi*,
51. கொடிப்படை — Kodippadai
52. நாட்டுப்படை — Nāttuppadai
53. கைக்கோளப் படை — Kaikkolappadai
54. வேளைக்காரப் படை — Velaikkarappadai
55. S. I. I., ii, Part I, pp. 9 & 10. In the inscriptions of the Imperial Cholas we have a rare evidence of the highest value to show how the army was organised in the 10th Century A. D.

Distinction between the armed forces and civilians :

Armed forces and civilians were distinctly counted and diffrently treated. Civilians were not usually affected by the war. Giving notice to learned people of high moral character (Pārpana Makkal)[55a], aged, diseased, women and children to clear out of the region of war is a clear proof of this division.[56] However, destruction of the economic resources mainly agricultural fields by arson besides the destruction of irrigation tanks was also there.[57]

Commencement of War :

It was usual to examine the position of money, circumstances, time and the strength of the enemy before declaring a war. Strength of the enemy was exmined with the help of the political envoys and spies. It was customary to make a prior formal declaration of war.[58] As a prelude to a military campaign cattle-lifting[59] may be undertaken. It was a lawful act, although perhaps they were used sometimes for provoking another to enter into a war. Besides, as noted above, before the commencement of an actual war the following persons were asked to clear out of the region of war by beat of drum. They were cows, useful people or saintly teachers or learned people of high moral character[60], women, issueless, diseased, children and the old.[61] Armed contest to test the strength would actually take place at the outbreak of hostilities.

55a. It originally meant Arivers or learned people. See Kanagasaba Pillai: *The Tamils Eighteen Hundred Years Ago* and Swamy Vedachalam: *Civilization of Ancient Vellalas* Preface, pp. 7 & 8.

56. *Purananūru* Stanza 9.

57. *Puram* 15.

58. கிழ்ப்படியுங்கள், இன்றேல் உங்கள் நாடு அழியும் — Subdue or your country will perish.

59. *Purapporul Venbāmalai*, Vetchippadalam.

60. Kanagasabai Pillai: *The Tamils Eighteen Hundred Years Ago* and Swamy Vedachalam: *Civilization of Ancient Vellalas*, preface pages 7 & 8.

See also H. W. Tambiah: *The Laws and Customs of the Tamils of Jaffna* Pages 93 & 95.

61. Purananūru, Stanza 9.

Land warfare in general :

Generally elephant force will fight with the elephants and likewise the charioteers, the cavalrymen and infantry. Killing the wounded, fighting or following and attacking the one who had lost his dress, whose tuft had become disorderly, who had lost his weapon, who had entered the camp, and who ran after defeat were considered wrong acts of war.[62]

Hitting the enemy behind his back was considered such a heinous offence that it could be atoned by the person who so hit, only by fasting unto death as an insult to his valour and only death by fast, was a penance for that.[63]

Incidents after war :

On success the King will normally annex the territories to his. If not, the succeeding forces will practically destroy the defeated country. Forts will be destroyed, walls will be pulled down, villages will be gutted and lands will be spoiled.[63a] In the Kalinga expedition, though the war was fought on principles of fair fighting Karunākara Tondaiman laid waste the whole of Kalinga.[64]

Violence against enemy person :

Violence was countenanced only within the area of war. It was also permitted only to the extent needed for over-powering the enemy warrior. Fleeing persons, though in disguise, should not be pursued and attacked.[65] If he was disabled or disarmed or wounded to an extent that he cannot fight he was to be spared. Killing was generally admissible while fighting.

Treatment of the wounded and the disposal of dead bodies :

The ancient Tamil Kings generally attended to the treatment of the wounded and the disabled. They were imbued with such

62. *Purananūru*, Stanzas 4, 7, 15, 16, 41, 98 & 392.

63. *Purananūru*, Stanzas 65, 66, Karikāl Cholan sought a voluntary death for hitting his opponent on his back.

63a. *Purananūru*, Stanzas, 4.7.15, 15, 41, 98, 392.

64. See *Pattinapālai*, II. 228-270; *Kalingathupparani* K. K. 370-372.

65. See *Silappathikāram*, Kathai, 26, II, 225-230.

lofty ideals as they were dictates of the fair-fighting code. The famous poet Nakkirar, of the Saugam age, describes the action taken by King Nedunchelian II towards the wounded and the disabled in an inspiring manner. At mid-night, despite the bad weather and the drenching rain, the King went round and visited these suffering men and made kind and sympathetic enquiries of each soldier.[66]

We find that the dead bodies were picked out by the wives or handed over to them for being disposed of by them. Some of them died with the dead bodies of their husbands.[67]

Captivity :

The prisoners of war were treated honourably. When Séran Senguttavan had Kanaka and Vijaya as captives, the Pāndya and Chola monarchs spoke disparagingly of Senguttavan for capturing the fleeing ones and for his treatment meted out to them. Insulting the imprisoned defeated monarchs by making them carry stones on their heads from the Himalayas to the South was considered as an improper treatment of prisoners.[68] In the above case, the captives were immediately set free and sent back to their capitals.[68a] Prolonged imprisonment was not the practice. However history says that King Karikāla Chola brought a number of captives as a result of his Ceylon expedition and used them for the construction of the huge bunds of the Kaveri river.[69]

Appropriation and utilization of enemy property :

Looting loomed large during war. Among the properties collected by looting during war, the contents of the treasury, properties, elephants and horses were taken as the property of the successful monarch. The rest were shared or retained as the case may be by the warriors.

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66. *Pathuppattu* ; *Nedunalvādai*, II. 168-188.
67. *Purananūru*, 280.
68. See *Silappathikāram*, Kāthai, 28, II, 85-109.
68a. ibid — Kāthai, 30, II. 158.
69. *Kalingathu-p-parani*, K. 197.

Espionage :

The organisation of spies was an integral part of the military system and an important element of the State administration. It existed from the Sangam age.

Thirukkural says that spies and codes of ethics are two eyes of the King. The spies were called the eyes of the King. The duty of the spies was to obtain secret information and to prevent in proper time the evil actions of foes against the King and the State. The King used to satisfy himself as to the truth of the information or the loyalty of a spy by sending another spy or by appointing another spy to watch the first one. The Kings sometimes sent three spies, each one not knowing the other, for obtaining information about a single act. If all the three brought the same information it was to be accepted. If they differed he will order further examination. The King gave rewards to the best spies without being known to the others.[70] That they existed in large numbers is borne out by several literary works like the Ṭhirukkural and Silappathikāram.[71]

Warfare on sea :

Tamil part of India had a flourishing sea-trade for many centuries before the beginning of the Christian era. The fact that there was active foreign trade between Tamil-India and the outer world at least from about the time of Solomon, i.e., about 1000 B. C.,[72] cannot be denied. Hence, it is necessary to presume the maintenance of ships for war. References are availabe to maintain that piracy was controlled and goods were sent to far off Asian, European and African countries.[73] However, it is not possible to assert whether warfare on Sea was undertaken largely.

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70. *Thirukkural*, Adikāram, 59. The qualifications and duties of spies are also prescribed. See Adikāram 51 & 52.

71. *Silappathikāram*, Kāthai, 25, lines. 173–177

72. See P. T. Srinivāsa Ayyangār : *History of the Tamils*, Chapter XVIII ; V. R. R. Dikshitar : *War in Ancient India*, p. 290 ; Periplus translated by Scoff, p. 46.

73, See Caldwell *Comparative Grammar*, p. 88. See also P. T. Srinivāsa Ayyangār : *History of the Tamils*; and V. R. Ṛ. Dikshitar : *War in Ancient India.*

Firstly, there is no description of any war on sea from the available literature. Secondly, Tholkappianār who wrote a Grammar on War literature [74] has not deemed it fit to accept it as an important topic under war. Probably, sea-war was rare. Reasonably, the ships were used for conveying the forces to the territory of the enemy country. Blockade of the ports of the enemy country and intercepting the supplies carried by the ships to the enemy country were not unknown but was not considered important. However, it is interesting to note that there is a reference to a war on the sea by Seramān Kadalpirakkottia Velkelu Kuttuvan.[75] We have the evidence for a Cēra King conquering the Kadamba.[76] The Céra King Senguttuvan defeated the Yavanas with his fleet.[77] After the beginning of the Christian era particularly after the Sixth Century A. D. we have ample evidence for a fleet maintained and engaged in the successive expeditions to Ceylon by Pallava, Pāṇḍya and Chola Kings.

The Tamils were very well advanced in navigation and ship building. They used a mechanical device to sail against the current of the wind.[78]

Non-hostile relations to belligerents :

During war also envoys were sent to negotiate, compromise or to purchase peace or accept surrender. Sending of envoys for the last purpose was not usual as the Kings usually fought to the bitter end or fled away. Safe conducts and safe-guards were usually provided for these envoys. Inviolability of the person of the envoy was the order of the day.

Flowers :

Before reaching the battle field it was the practice of the Kings to give flowers for identification. Flowers [79] were also

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74. தொல்காப்பியம் *Tholkāppiam* : Purathinai Iyal.

75. *Puranānūru*, Stanza, 126. See also *Madurai Kānji* (75.88)

76. *Paditruppathu*, Pathikam, 5.

77. S. K. Ayyangar : *Contributions of South India* p. 330.

78. *Puranānūru*, Stanza, 66.

79. *Purapporul Venbā Mālai*, Kolu, 36, 61. 95, 127 etc.

used for indicating the operation undertaken by an army at that time as mentioned earlier. Commanders and distinguished warriors were given golden flowers instead of natural flowers. Use of flowers not only for indentification of the side to which a fighter belonged but also to indicate the operation undertaken at that time clearly proves the refinement attained by the ancient Tamils in the art of war.

Similar refinements are not to seen in the history in the conduct of war, in any other region, even long after the beginning of the Christian era. Probably dress regulation later on satisfied the problem of identification.

Modes of termination of war :

There were four modes of termination ofwar. They were :— 1. Complete extinction or death of one side, 2. Both the Kings entering into a treaty,[80] 3. Agreeing to pay tribute to victor, or 4. The defeated king fleeing. Simple cessation of hostilities was not very much in vogue. Matrimonial alliance was also a normal incident after a war. Subjugation gave a right to annex the territories of the defeated King. Treaties were entered into for marking the termination of a war. It ushered in a sort of friendship, or a gift of a portion of the territory of the defeated King or evidenced a matrimonial alliance or created a protected or vassal state.

Neutrality :

Neutrality was not unknown to the Tamils. Evidence is not available to support whether there was a formal declaration called for and resorted to. Anyway feeding the army belonging to both the parties was not considered to be inconsistent with neutrality.[81]

Weapons :

There were more than one hundred different kinds of weapons. They may be broadly grouped under six heads.[82] They

80. See *Puram*, Stanza, 57.

81. *Puranānūru*, Stanza, 2.

82. See Dévanéyan: *Patham Tamizhātchi*, p. 104.

were throwing.[83] stabbing.[84] cutting,[85] beating,[86] defending[87] and piercing[88] weapons.

Camp :

Military camp in those days were called by the Tamils as Pāsarai.[89] The special place occupied by the King or the Commander was, in a technical way, also called as Pāsarai. Plans were drafted, decisions were taken and envoys were received or sent to or from this place. Time keepers were to attend there. Bodyguards wearing uniform and head dress went round the camp.[90] Wars were waged only during day time. When the day drew to an end the soldiers would retreat to their camp and would start the operation again on the next morning only.

War Music :

Classical Tamil literature provides ample references to different kinds of musical instruments used in war. They were used for collecting the people at a common place in order to publicise an order of the king, to call the people to render war service, for relief against tiresomeness during the march, for entertainment during night and chiefly for making such a hell of a noise to enthuse the warriors to fight with added vigour.[92]

Dinner :

Before starting for the expedition it was usual for the Kings to give a good dinner to the warriors.[93] It was called as Perunchotru Nilai.[94]

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83. எறிபடை — Eripadai
84. குத்துப்படை — Kuthuppadai
85. வெட்டுப்படை — Vettuppadai
86. அடிபடை — Adipadai
87. தடுபடை — Thadupadai
88. எய்படை — Eipadai
89. பாசறை
90. See Dr. Rajamanickam: *Pathuppāttu Scenes* pp. 47-48 & *Nedunalvādai.*
91. See *Silapathikāram*, Kathai, 26, 1., 35; Puranānūru, 53 and also *Maduraikkanji*, lines, 732-3.
92. See V. R. R. Dikshitar: *War in Ancient India*: p. 380.
93. See *Śilappathikaram*, Kathai, 26, 1. 49.
94. பெருஞ்சோற்று நிலை

Nimittam:

It was the practice of the kings to start the expeditions on a good day.[95] If it was not possible to start on that day he will send his umbrella and sword to a place outside the fort, called Puraveedu.[96] Sometimes his Murasu or drum will also be sent

Stratagems :

Straight fight was the rule of the Law. Skill was permitted in the organization, training and use of the force in the battle field. Arrangements of the force was an admitted matter of skill. Selecting the battle field required a special knowledge. Preferring a particular season also played an important part.

The actions that may be taken by a king against another enemy king were fifteen fold.[97] They were good word,[98] separation,[99] joining,[100] gift,[101] treaty,[102] punishment,[103] ignoring,[104] showing force,[105] cheating,[106] concealing,[107] conciliation,[108] protection,[109] duel,[110] challenge[111] and contests in fine arts.[112]

The Thirukkural prescribes that a special skill was essential for a king in the prosecution of a war.[113]

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95. *Silappathikāram*, Kathai, 26, II. 27-30.
96. புறவீடு ; *Purapporul Venba Mālai*, 38, 39, 67, 68, etc.
97. See Devaneyan: " *Pazham Thamizhatchi*, p. 101.
98. இன்சொல் — Insol
99. பிரிதல் — Pirithal
100. கூட்டு — Koottu
101. கொடை — Kodai
102. உடன்படிக்கை — Udanpadikkai
103. தண்டனை — Thandanai
104. அசைவின்மை — Asaivinmai
105. ஆரவாரம் — Āraāvram
106. வஞ்சனை — Vanjanai
107. ஒளிவு — Olivu
108. சந்து — Sandu
109. புகலடைவு — Pukaladaivu
110. மற்போர் — Marpore
111. அரட்டு — Arattu
112. கலைப்போர் — Kalaippore
113. Thirukkural, Adikaram, 49, 50, 51, 55.

Virakkal :

The heroic dees of a great warrior who stood to the last or stood and won the laurel of victory did not go unrecognized. Stones were planted, inscribing the place, name and heroic deeds of the Commanders and distinguished warriors. It was called as Vīrakkal[114] or Nadukal[115] or Kalnāttu.[116] Such stones were planted evidencing and inscribing the relief given to the family of the dead warrior at the battle.[117]

Kāvalmaram :

Just like planting the flag on the capital of the enemy country is a symbol of victory nowadays, felling the tree reared by a King as a Kāvalmaram (i.e., a tree supposed to protect the kingdom) was a symbol of victory in those days. Some-times felling this tree was used for the purposes of provoking the enemy to enter into a war.[117a]

Heroines :

We hear of a heroine who sent her little young son armed with a Vél, after the death of her father fighting an elephant at the battle field, and after the sad demise of her husband in defending the cattle lifting.[118] Another heroic mother of the ancient Tamilnad ran to the theatre of war with a vow to cut off her breasts that fed him if her son had died of a wound in the back. On the other hand, when she found, he had died of a wound at the chest, she felt immensely over whelmed with joy, though it was a loss of her only son,[119] and the loss was at her old age.[120]

Mara-k-Kanchi 121 (Preferring death)

Though there is evidence as to the medical aid for the wounded at the field of action, it is very curious to note that

114. வீரக்கல் 181 of 1901, S. I. I. p. 283 & S. I. I. p. 245.
115. நடுகல்
116. கல்நாட்டு
117. 181 of 1901, S.I.I. VII. p. 245.
117a. கடிமரம், *Puranānūru* 23, 36 57.
118. *Puranānūru*, 279.
119. Sen Tamil, Vol - V., *Puranānūru*, 278.
120. *Puranānūru*, 277.
121. மறக்காஞ்சி

the Sangam classics prescribed that a hero should prefer death when wounded at the battle field. When wounded the warriors refused medical aid and opened the wound thereby courting voluntary death.[122] When kings received wounds on their backs they sought voluntary death[123] to save their honour. All these are purely Tamilian ideas. The Law of the Tamils prohibited a warrior hitting the enemy from a hiding place. For the Tamils, death otherwise than in a straight and fair fight was not commendable.[124]

Forts :

Forts were divided into four categories. Those built on the plains, maintained on the mountains, surrounded by the forest and enclosed by water, were the four. It was proper for the force having instituted a siege against a particular fort to prevent supplies being taken to the fort. The act of a neutral State or people belonging to the neutral States, when engaged in sending supplies, was considered as an unfriendly act. Elephants were used for breaking the door of the fort.[125] Ladder was also used for scaling wall.[126] Forts were equipped with many automatic mechanical devices.[126a] The capital city was protected by one or some or all the five different kinds of barriers.[127] The five barriers were the compound wall, barren land, water barrier (deep and wide ditch touching the rampart walls), forest and mountain.

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122. *Tholkāppiyam*, Purathinai Iyal; *Purapporul Venbā Mālai*, Kolu, 75.

123. See, Puram, 65 & 66. Both of them, the one who hit and the one who received the wound on his back died.

124. But, the North-Indian tradition permitted it. It was considered by them as no sin to strike the enemy at his weak points. Note Rāma hitting Vāli while fighting with Sugriva from a hiding place. See Kanaka, Vijaya carrying stones on their heads to the South & lived after being set free. *Silappathikāram* refers to warriors of Kanaka, Vijaya escaping from the battle field in disguise as ascetics, teachers, musicians etc. *Silappathikāram*, Kathai, 28, 11. 90 and 93. See also, Kamandaka, 20, 57 & V. R. R. Dikshitar: *War in Ancient India*, p. 62,

125. *Purananūru*, Stanza, 31.

126. *PurapporulVenbā Malai*, Kolu 112— ஏணிநிலை

126a. *Silappathikāram*

127. See Dévanéyan: "*Pazham Thamishatchi*" p. 58.

Challenge :

It was customary for the kings to declare that if he did not succeed he shall leave his wife [128] or in like terms.[129] When Seran Senguttuvan led his expedition up to the Himālayas he also made a declaration.[130] Challenges were thrown in the battle field by the warriors also. It was a duty of a warrior to accept the challenge.

On warriors in general :

The Tamil warriors were a class by themselves in those days. Arthasāstra, dealing with the characteristics of the warriors of the different countries, says that the South Indians are said to be experts in sword warfare.[131] Fighting an elephant was a proper act and success in that was considered commendable.[132]

Ambassadors :

The institution of sending envoys was ageold and referred to in Sangam literature. It is far beyond our knowledg of history of this part of India. It was so organized and well-maintained and existed for such a long time as to take one full adhikāram (Chapter) in Tirukkural.[133] This institution presents a clear picture of the advancement of international relations in those days. For purposes of this topic (War), the envoys may be divided into two categories as (1) those sent during the times of peace and (2) those sent during the times of war. It is interesting to note that teachers or learned men were generally sent as envoys.[134]

It was usual to send envoys during the times of war.[135] During the Sangam age a poetess called Avvaiyār was also sent

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128. *Purananūru*, Stanza, 71.
129. *ibid* Stanzas, 72 & 73.
130. *Silappathikāram*, Kathai 25, 11.128-140.
131. *Arthasāstra*, Book IX, 2; Santi, 101.
132. *Purananūru*, Stanza 312.
133. *Thirukkural*, Adikāram, 69.
134. *Tholkāppiam*, Akthinai Iyal, rule, 25, and its commentary.
135. See *Silappathikāram*. Kāthai 26, ii. 137-165.

as an envoy [136] which resulted in averting a war betweeu Adiyamān and Thondamān.[137] It looks as if the learned people (poets or Arivars) were held in such a high esteem by the king and the people as to advise a king even though it may incur the displeasure of the king. Whenever the Tamil kings, two or three, met together they were impressed by the poets upon the necessity of not fighting among themselves. Perhaps, it was the extent to which they loved peace.

Relief to the wounded and to the families of the dead :

After the termination of war it was usual for the kings to give medical aid for the wounded or to see them and console them or when they were dead to console their relatives. It was a duty of the king to make sufficient provision for the maintenance of the family of the deceased.[138]

Recognizing the meritorious services and appreciating the all-round fight put up by a warrior, the king may give gifts to him.

Enforcement :

Lack of prescription of proper sanctions and of the constitution of an institution, powerful enough, to enforce the law is a serious criticism advanced against modern International Law. The same may be advanced against the ancient system which I have presented. It is true, that, from the available material, there is no provision for the proper punishment of the violation of laws of war. It was left to the honour of the valourous. Public opinion and public consciousness were well developed in those days as to make the offender himself to seek amends.

One Céra King called Perum Chéralāthan was wounded at the back in a fight against Karikāl Chola. Both sought voluntary

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136. *Purananuru*, Stanza, 95.
Note that there was a controversy on the advisability of sending women as envoys till recently among the European powers.

137. Ibid.

138. An undated Virakkal belonging to the 9th century A.D., in the Kotravai temple at Hosaholale, records the giving of such relief to the relatives of dead soldiers. 181 of 1901, S. I. I. VII, p. 245. In the Kanarese inscriptions the term Kalnattu stands for some such relief Ep. Car. XII p. 111.

death and died by fasting.[139] Perum Chéralāthan thought that it was an insult to his heroism and hence as amends he should die. Karikāl Chola thought that to hit the enemy at the back was such a ridiculous wrong and an insult to his honour that he should die to amend his wrong.

Again, we find that when Séran Senguttuvan after his expedition to the north brought Kanaka and Vijaya with stones on their heads the Pāṇdya and Chola kings criticised him for his treatment of the prisoners of war[140] They were immediately set free.

For the prevalence of such strong public opinion and respect for the laws, the reasons that could be visualised are, that the civilization attained by the Tamils in those days was so high and the practice of these laws was for so long a period that it had become part of the blood stream of a Tamilian since the beginnings of civilization.

Conclusions :

From the foregoing survey the following conclusions may safely be arrived at :-

1. Wars were fought in accordance with settled principles even before the beginning of the Christian era.

2. Sufficiently ennobled and humanized wars were waged by the Tamils.

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139. *Puram*, 65 & 66.

140. *Silappathikāram*, Kathai, 28, II., 85-109.

THE ETHICAL PHILOSOPHY OF THE ANCIENT TAMILS

K. D. THIRUNĀVUKKARASU, M.A. (Tamil), M.A. (History), M. Litt., Dip. in Linguistics,
Associate Professor,
International Institute of Tamil Studies, Madras.

Ancient Tamils did not believe in any permanent feud between the human world of natural desires and social aims, and the spiritual life with its discipline and aspiration. They have given a unique place to *Aṟam* in their everyday life. Their conception of *Aṟam* as a regulative principle of life appears very significant Tamil literature.

The supreme values of human life have been called by *Tolkāppiyar* and other poets of ancient Tamilakam as *'mumutar poruḷ'*.[1] The three phases of the human endeavour are represented by this term. They are the doctrines of *Aṟam,* Ethical principles, *Poruḷ,* i,e. the political economy and *Kāmam,* the doctrines of psychology of l·ve. In other words, *Aṟam* represents the moral values, *Poruḷ* implies economic values and *Inpam* indicates the psychological values. These are the three-fold paths that ultimately lead to eternal bliss.

Aṟam, the first of the three aims, as we have seen earlier, comprises the whole context of moral and religious duties of man. *Aṟam* is the doctrine of the duties and rights of each individual in the social set up of ancient *Tamiḻakam.*

The second end of human aspirations is the material possessions. The arts that serve this aim are those of economics and politics. Literally the word *Poruḷ* means, "things, objects, substances," and comprises the whole range of the tangible objects

1. *Tolkāppiyam*, 1363.

that can be possessed, enjoyed and lost, and which we require in daily life for the upkeep of the household, raising of a family and discharge of duties for the virtuous fulfilment of life's obligations. Objects that contribute to the sensuous enjoyment, gratification of the feelings and satisfaction of the legitimate requirements of human nature, such as love, learning, knowledge, wealth and other pleasures of life are also included in this phase of human endeavour.

Poruḷ thus connotes the attainment of riches and worldly prosperity, advantages, profits, wealth and result.[2] It is also used to represent the subject matter and object.[3] With reference to the external world, '*Poruḷ*', in its widest connotation signifies, that which can be perceived, an object of the senses,[4] with reference to the interior world of psyche, it represents the end and aim, purpose, object wish, desire, motive, cause, reason, interest, use, want and concern.[5] *Poruḷ* also implies essential principle, reality, doctrine and the objective of human existence.[6] It is also significant to note that *Poruḷ* in ancient Tamil literature generally implies the 'objective' (*Puṟam*) and 'subjective' (*Akam*) affairs of life that form the themes of poetry.[7] *Poruḷ* thus implies (1) the object of human pursuit, (2) the means of pursuit, and (3) the needs and the desire suggesting this pursuit.

The most important aspect of *Poruḷ* is the science of 'polity' that deals with the political activities of the individual in every day life, and the efforts of gaining exercise and maintenance of power and wealth as a king[8]. The second part of *Tirukkuṟaḷ* is well known as '*Poruṭpāl*' which deals with the polity, diplomacy, political economy and several aspects and administration which are nobler than the statecraft of Machiavelli and Hobbes.

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2. *Kuṟal*, 423.
3. *Cuṭamaṇi nikaṇṭu*: 1263; *Kuṟaḷ*, 423; *Kali*, 8.
4. *Civakacintāmaṇi*, 1436.
5. *Kuṟuntokai*, 174.
6. *Maṇimēkalai*, Prefactory verse, 87, *Kuṟaḷ*, 5.
7. *Tol* Porul. Introduction Nacc. com. pp. 1-2.
8. *Kuṟaḷ*, 141.

The third and last of the three ends of human life is pleasure and love. Most of the ancient Tamil literature deal with this aspect elaborately. Hence, they are significantly called as *Akap-poruḷ nūṟkaḷ'* The dominant attitude of ancient Tamils towards love and pursuit of pleasure appears to be refined and well advanced to their times in comparision with the literature of other countries. There was hardly any technical literature or the science of love in ancient Tamiḻakam. But, the practical needs of the yearning hearts are graphically described with the background of psychology of love. A subtle analysis of the feelings and manners of emotional expression are clearly portrayed in the subjective poetry of ancient Tamil Literature.

'*Vīṭu*', the ultimate aim of the human aspirations is redemption or the self-realisation of man. This '*Vīṭu*' has been specifically stated nowhere in *Tirukkuṟaḷ*. It is commonly supposed that this fourth end of the human aspirations has been omitted because it is out of human conception.[9] Therefore, it has been the cherished tradition to speak of the supreme values of human life as the 'Trio of Human Ends' in ancient Tamil literature.

Thus, '*Aṟam*', '*Poruḷ*' and '*Iṉpam*' are the pursuits of the world. Each implies its own orientation or the philosophy of life and to each a special literature is dedicated. *Tirukkuṟaḷ* is the embodiment of these three phases of the philosophy of life. These three values of human life in ancient times, even before the days of Tolkāppiyar has been classified into two categories as *Akam* or the subjective values that deals with *Iṉpam* and *Puṟam* or the objective values of life that deals with the ethical and political aspects of human life.

We are inclined to question whether the function of *Aṟam* is limited to the regulation of the pursuit of wealth and pleasure or whether it has any purpose of its own? In order to have a clear idea about this intricate problem, we must first analyse the two aspects of this question with the help of ancient Tamil literature.

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9. Parimēlaḻakar's Preface to *Kuṟaḷ*.

The popular view is that *Aṟam* has no purpose but a means to an end. In other words *Aṟam* is conceived as an instrument through which the goal can be attained. The incessant pursuit of *Aṟam* in its double aspects of self-regarding and other-regarding virtues results in one's good here as well as in the next birth.

Tiruvaḷḷuvar exhorts that as *Aṟam* gives eternal bliss and temporal wealth, then what is there that is more profitable than *Aṟam*?"[10] This 'good', whether it stands for worldly happiness or eternal bliss is as a whole designated as '*iṉpam*' (pleasure). Further, it is believed that *Aṟam* not only leads to the goal but that it does so invariably. Another reason is attributed for its superiority over the other two values whose pursuit may not be successful. But, it should be added that for the attainment of the fruits of *Aṟam*, one may have to wait for a long time. However, the important point is that, it is sure to yield its fruits at sometime, even though it may be realised after some vicissitudes.

The other view which is highly spoken of and admired is that *Aṟam* has an intrinsic value and therefore is an end in itself. This view is maintained by *Vaḷḷuvar* and some other great thinkers of the Tamil country. Albert Schweitzer has pointed out this idealistic approach of *Vaḷḷuvar* in his treatment of *Aṟam* and pays lofty tributes to *Vaḷḷuvar*. He observes:

"In the ethics of the *Kuṟaḷ*, as in those of the Laws of Manu, the idea of reward has a place. The way of virtue is recommended because it leads to a better reincarnation or to liberation from rebirth. Alongside of this is found also the 'naive' view which is conspicuous in Chinese ethics that moral behaviour results in earthly welfare and immoral in misfortune. Nevertheless, ethics in the Kural are not so entirely dominated by the idea for reward........................ ....

We already find here the knowledge that good must be done for its own sake. In shines out from various maxims,"[11]

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10. *Kuṟaḷ*, 31.
11. Schweitzer, Dr. Albert,: *Indian thought and Its Development*, P. 197.

Then he quotes from *Kuṟaḷ* the following maxims:

"Even though one should say, there is no higher
world it is still good to give.". —*Kuṟaḷ* 222

"True liberality asks nothing in return,
What does the world give in return to the
cloud that gives it rain." —*Kūṟaḷ* 211

The view that 'Virtue has its own reward' has been maintained and expressed by some other poets of the *Caṅkam* Age. In *Puṟanāṉūṟu* a poet praises *Āy* the great hero and patron of poets and bards who was the chieftain and 'lord of the *Potiya* hills.' He says that.

"*Āy* is not the person who thinks that righteous actions done in this life have its own reward or happiness in the next. He does not have any mercenary motive. His munificence lies in his principle of following the virtuous path paved by the great men that good should be accomplished for its own sake."[12]

The poet deliberately rebukes others who are interested in adhering to the virtuous path with mercenary motive or the business outlook even in the sphere of *Aṟam.*

Paraṇar, the renowned historian of the *Caṅkam* Age, pays his tribute in the form of an immortal piece of literature to *Pēkaṉ*. one of the seven chieftains who in later times became famous for their liberality. *Paraṇar* describes *Pēkaṉ* as a man of lofty ideals: "He gives liberally to those who have come to his court in need of his help without any limit or restriction because he thinks that it is good to help others. His munificence lies in his egalitarian outlook to help those who die from privation, but not in securing a good re-birth.'"[13]

From these evidences, it appears that the aim of morality must be absolute in the sense that it has nothing to do with our likes and dislikes and moral principles should be followed solely out of

12. *Puranānūru*, 134.
13. *Ibid*, 141.

respect for it, It is the nature of *Aṛam* thus to be ultimate. This conception of *Aṛam* presupposes a moral order which is to be maintained and has therefore prior claims over motives of mere self-interest. *Aṛam* therefore is to be obeyed first and last for its own sake, heedless of any benefits accruing to the moral agent. Such a lofty conception of duty is found only in the ethical schools which emphasise objective right in contrast to individual interest. The 'Hedonists' and 'Materialists' have no place for such a notion of 'Duty' and they could dispense with it as an ascetic ideal.

This idealistic conception of ancient Tamils reminds us the well known principle of practising Virtue, for its own sake, The Kantian theory of 'Duty for Duty's sake'[14] resembles this view of *Aṛam*, though certain subtle distinctions may be drawn between the two.

Ancient Tamil wisdom recognised fully well the double aspect of human nature, self-love which urges one to seek one's own interest and the other which impels one to take into account the interest of others. Contrary to Hobbes and others, they believed that man is by nature and even in his un-moralised condition, a social being. The raw material of the moral life is therefore not merely the primary feeling for the self, but it also includes the primary regard for others. The law of the process of moralization is the same in both cases–the dutiful attitude towards fellow-beings is fundamentally the same as dutiful towards ourselves. How is it possible? It is possible when the self realizes with the aid of the Supreme Intelligence that it is the chip of the divine force that pervades the whole universe. The self realization of man or true knowledge is to stand in the ideal way of devotion and love towards all creatures. Then, every individual would show reverence for all life.[15]

In reality, therefore, what is good for the other man is good for me also, what is his happiness is also my happines. The law of the individual life is also the law of the social life. So, the Moral development of man is doing away with the limitations of

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14. Kant, E.: *Critique of Practical Reason and other works on the theory of Ethics*, PP. 279-80.
15. *Kuṛaḷ*, 80, 244.

the merely selfish and the realization of the self is achieved by properly discharging the duties owed to other living creatures. A man is not serving his fellows in order to serve himself better; for that would mean that he uses others as instruments. As Kant has expressed in his famous dictum: "So act as to treat humanity, whether in thine own person or in that of another, always as an end and never as means."[16] This is what the Tamils right from the *Cańkam* Age have borne in mind, in their every day life and activities which has been attested by the evidence that we have referred earlier.

When we say that the welfare of the society has prior claims over self-interest, the critic may ask: "Does not this render the moral life an impersonal one? If the individual strives to maintain a presupposed 'social order' what happens to the 'person' in me?" It is the duty of the student of the moral philosophy (of ancient Tamils) to answer. Such doubt is due to a confusion of the term "social" The term "society" is used even by eminent sociologists as if it has a life of its own."[17] Society, they say is an organism and the individuals are but its members. We can agree with this statement, but the analogy sbould not be carried too far, for it is they who live not apart from it. We agree that the individual apart from society is an "abstraction", but we assert that society apart from its members is a myth. That is why we prefer to call society as an organization rather than as an organism, A common self is to be realized in each invididual and in infinate ways, the life of each is bound up with that of all. In seeking therefore the good of society, we mnst not actually negate ourselves, but identify ourselves with the selves of others. The progress of society is only the progress of the individuals. Hence, the life of virtue such as the life of *Pēkaṉ* described by *Paraṇar,* in no way can be said to be impersonal.

It is an understanding of this great truth, the truth that the ethical unit is always the person and the progress of society is only the progress of its individual members, that made the ancient

16. Kant, E.: Op. cit. P. 47.

17. Mackenzie, J. S.: *Outlines of Social Philosophy*, P. 50
Mac Iver, R.M. & Page C.H.; *Society*, P. 8.

Tamils recognize the universal duties and to prescribe them specically for the house holder and the ascetic. Universal love was the moral imperative, whatever be the individual's station in life.[18] This morality of universal love is now commonly called as "reverence for life". Here, the individuals act with the welfare of all in view and society has always the welfare of each in mind. This has been cônsidered as the highly commendable ethical ideal. Perfecting himself, the individual contributes simultaneously to the progress of society. Even the highly perfect man—*caṉrōr*—has his duty towards his society. For action is the very nature of the self, and no man can remain inactive for a moment. This has been justified in *Kuṟaḷ* by the idea of ethical activity. Work and profit place a man in a position to do good, If one weighs the value of the good deed done without consideration of the advantage, its kindness is greater than the ocean.[19] 'Wealth in benevolence is the treasury of the rich.[20] 'Wealth in benevolence is the wealth of wealths; Wealth is possessions the mob has also,[21]

The 'self' is therefore like hedonism and materialism only partly, for it is only the individual nature of the self that is realised. In the ideal under discussion, the self realized is a whole—both the individual and the social aspects of the Self are realized at once. To the individual by a strict adherence to the *Aṟam,* bliss is guaranteed here and in the hereafter. *Vaḷḷuvar* categorically remarks that 'there is no greater good than *Aṟam,* from the practicce of which flow the various riches and heaven.'[22] In another context, he refers to the double aspects of moral goodness viz, devotion to social duties and the culmination of the personal virtues. *Vaḷḷuvar* instructs that "every good act is duty to those who have realized that it is proper to seek perfection."[23]

There is the further assurance that 'he who perfoms his duty but abstains from evil deeds incurs no sin'.[24] This is the ideal which

18. *Kuṟaḷ*, 80
19. Ibid. 103.
20. Ibid. 226.
21. Ibid. 241.
22. *Kuṟaḷ*, 31.
23. Ibid. 981.
24. Ibid. 38.

is unique, inspiring and possible. The man with an impulsive and energetic nature can discharge his duties by leading the life of the householder. After attaining indifferent taste by gratification in mundane possessions and pleasures, he can have different duties to perform by renouncing the bindings of the family life which has been highly spoken with great reverence in the *Cankam* Age.[25] Thus, here is no contradiction arising as in the Kantian theory. In this aspect of *Aṛam*, again there is a guarantee that each will do their part and nothing is more enconraging than such an assurance. This is absent in Kantian theory of the 'duty for duty's sake,' In the domain of Tamil thought, as generally found in Indian thought, all creations are taken into account and duties are due not only to one's kith and kin but to the animal and even the plant kingdoms. Thus, embracing all, the individual becomes perfect and there is no room for conceit. And the process of the self-realization of the individual rests in the progress of society.

We have thus seen how the Tamilian ideal of *Aṛam* is theoretically sound and practically realisable. The testimony of ancient Tamil literature bear ample proof to the fact that such a life was actually lived by the people of ancient Tamilakam. It is this lofty ideal of *Aṛam* that has kept us up in the face of frequent attacks and prolonged sufferings and sorrows under the domination of the foreigners.

25. *Tolkappiyam*, 1138.

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DANCE IN ANCIENT TAMIL NADU

BY

S. GURUMURTHY, M.A., M.Litt.,

Dip. in Anthropology, Lecturer, Department of Ancient History and Archaeology, University of Madras.

In ancient Tamil Nādu much attention was paid to the progress of social and cultural activities in all possible ways. Dancing and dramatic groups, singers and musicians and other artists were extended encouragement, offered employment, not only by the ruling authorities but also by various cultural associations and institutions like the temple. The progress of fine arts in Tamil Nadu reached a high water mark during the early centuries of the Christian era.

During the Śaṅgam age, the three principal arts, viz., music, dance and drama were practised intensively and extensively through out the country—a fact borne out from the epic *Śilappadikāram.* Of the three disciplines, dance was considered to be a sacred art and practised by men and women. Particularly young girls from various walks of life were fond of learning this art to enhance their status in society. It also gave them some mental satisfaction and exercise to their physique besides giving them on opportunity to earn money and reputation. This art was so popular that the contemporary literature contains a volume of information about the same. Some of the leading personalities or heroines figuring in such literary works are described as great experts in this art.

Performances of dance may be divided into two kinds namely secular and religious. In the early centuries of the Christian era, dance performances were held in connection with some functions arranged in a king's court, or in public places or in drama theatres. They were generally secular in character as we see today, We

find today that dance performances are being arranged in Sabhās for purposes of entertainment to the public. But in the post-Saṅgam epoch, there developed some religious unrest throughout the country, as a result of which, the attention of the people was reoriented and diverted towards the prom otion of the religions, in which they had faith. On account of such religious conflicts, there arose a number of Hindu temples, *maṭhas*, Jaina paḷḷis and Buddhist vihāras in many places to popularies their own creed and *dharma*, and the functions of dance were brought very close to the religious functions and festivals conducted in such institutions and were treated as a means to attract or convert the people from one religion to the other. It may even be said that the Hindu temples of medieval Tamil Nadu were the sole patrons of the dancers and offered them employment to do services connected with daily rituals and festivals in temples. They were treated as temple servants and provided with lands and house sites for their maintenance. But this tradition of employing dancing girls in temples has disappeared altogether in our country. Apart from that, the tradition of conducting dance performances during festivals in temples has also been discontinued. However musical performances and *Kathākalakshēpams* are being held in temples on such occasions. It is not known why the art of dance has been losing its place among the public now-a-days. While the age-old arts like music and drama are able to survive up to the present day, the art of dancing is struggling for its survival. Those who are interested in the promotion of this art and in the welfare of those who are employed in the field should seriously think about it and do something to popularise the art among the public.

The history of dancing goes back to very remote times in our country. It is 4500 years old—going back to the days of the Indus Valley people. Figurines of dancing girls have been unearthed from the excavation at Harappa and Mohenjo-dharo as also in a few sites like Maski in Mysore. Coming to the Tamil country, the earliest Tamil literary works, particularly *Śilappadikāram* contains many references to the practice of dance in the name of *kūttu*. *Kūttu* was a group dance mainly practised by the pastoral community. It was accompanied by music, vocal and instrumental. *Śilappadikāram* refers to eleven kinds of such *kūttus*, the details

of which are not clearly known.[1] Aḍiyārkkunallār, who has written a commentary on *Śilappadikāram*, mentions different kinds of *kūttus*, which are as follows:—*vaśai, puyal, vēṭṭiyal, poduviyal, vari, variśānti, sānti, vinōta, āriyam, tamil, eyalbhu, tēśi* etc.[2] These *kūttus*, indigenous in their origin and nature were in practice, not only during the Sañgam period, but also continued to survive and receive patronage in the subsequent periods for which there are evidences in the epigraphical records[3] and sculptures of the contemporary periods. For instance, there are some sculptured panels in a temple at Kāñchipuram representing some of the *kūttus* belonging to the times of the Pallavas.[4] These panels may be considered to be the first and earliest representations of these *kūttus*.

In *Śilappadikāram*, the dance-teacher or master is referred to as *ādal-āsiriyan*[5] and in the inscriptions of the post-Sañgam age as *naṭṭuvan*.[6] He is also said to have proficiency in other auxiliary arts and music which accompany the *kūttus* in the actual performances. *Śilappadikāram* contains information about the rules and regulations pertaining to the actual practice of dance. It also refers to a treatise on *nāṭya sāstra*, called *Nāṭya Nannūl*.[7]

Though the epigraphical records are completely silent about the teaching and learning of this art, there are certain phrases in *Śilappadikāram* referring to the term of appreticeship and necessary qualifications for a person to become a fulfledged dancer. Mādavi is said to have undergone intensive trining in dancing for a total period of 7 years, from her 5th to 12th years. At the age of 12, i.e. after the termination of her apprenticeship, she gave her maiden performance before the king in his court and obtained a certificate of proficiency in the art. During the period of her

1. *Śilappadikāram, Araṅkerrukkāthai*, v. 14; the line runs as *patiṅoru āḍalum pattum kūttum.*
2. *Śilappadikāram* (M. Venkataswamy Nattar edn p. 52).
3. 65 of 1914; 253 of 1914; 8 of 1928-29; 90 of 1931-32; 160 of 1940-41 etc.
4. These panels were discovered by the State Department of Archaeo. logy, Tamil Nadu, and reported in their publication *Damilica*, 1970. The author has also studied the sculptures *in Situ*.
5. *Śilappadikāram, Arañkērrukkathai*, v. 25.
6. 255 of 1925 and 206 of 1931. See also *S.I.I.*, Vol. II, No. 66.
7. *Śilappadikāram, Arañkērrukkāthai*, v. 158.

training, she was assisted by a number of experts in different branches of the art of movement and gestures, to learn the art in a proper way. Among those were, the vocalist, the composer of songs, the drummer, the flutist, the vīna-master besides the dancing master. Thus this incident clearly indicates that the girl's education in the field of dance or any other fine arts, started as early as her 5th year and was under the direct guidance of experts in the respective fields.[8] It appears to have been very difficult to learn this art because it requires proficiency in a number of auxiliary arts which should go hand-in-hand with dancing. It is stated in the same work that dancing girls were proficient in as many as 64 arts.[9] Mādavi was a popular dancer, whose dancing poses, which were as many as 11 in number āre elaborately described in the work.[10]

It may also be mentioned in this connection that dance is found mentioned as one of the subjects of study in the inscriptions of ancient and medieval Tamil Nadu; but they are very cryptic and do not throw enough light on the teaching and learning this art.

8. *Ibid.*, v. 7.

9. *Śilappadikāram, Ūrkāṇkāthai*, v. 167; *eṇṇen kalai-yōr iruperu vīliyūr.*

10. *Ibid., Kaḍalāḍu kāthai*, v. 66.

BIOGRAPHICAL SKETCHES OF INDIAN ASTRONOMERS AND MATHEMATICIANS

BY

PROF. K. D. BAJPAI,
University of Sagar.

[The short note gives the biographical sketches of the ancient Indian astonomers and mathematicians whose contributions to these sciences have been recognized.]

1. *Aryabhaṭa*

Āryabhaṭa was born in Śaka 398 (A.D. 476) probably at Kusumapura or Pāṭaliputra. His knows works are: (i) *Āryabhaṭīya*; (ii) *Daśagītikāsūtra* and (iii) *Āryāshṭaśata*. Of these, Āryabhaṭīya is the most important work. It was composed in Śaka 421 (A.D. 499).

He was the first to treat mathematics as a distinct subject. He dealt with the evolution and involution, area and volume, progressions and algebraic identities, and indeterminate equations of the first degree.

Āryabhaṭa was also the first to hold that the earth was a sphere and it rotated on its axis. He boldly asserted that the eclipses were not caused due to Rāhu, but they occurred on account of the shadow of earth falling on the moon. These views were rejected and condemned by later astronomers like Varāhmihira and Brahmagupta. Āryabhaṭa also arrived at a remarkably accurate value of π, viz. 3.1416.

One of the most important features of Āryabhaṭa's mathematical system is his unique system of notation. It is based on the decimal place-value system, unkown to other ancient thinkers, but now in use throught the civilized world. Whether Āryabhaṭa

invented the system or merely improved on an existing theory, cannot be definitely stated. With the doubtful exception of Bakhshali manuscript, datable to about 200 A.D., the earliest use of the system occurs in the *Āyyabhaṭīya*, and it is followed by the later mathematical works. The importance of this system for the development of science in general, and of mathematics in particular, cannot be overestimated.

On the whole, Āryabhaṭa deservedly occupies a high place among Indian astronomers and mathematicians. He enjoyed the enviable position of having a large number of followers and commentators.

2. *Varāhamihira*

The next in order of time is Varāhamihira. He takes the Śaka year 427 (A.D. 505) as the basis for calculations. Accordingly, he is said to have flourished towards the close of the fifth century A.D.

In his work *'Bhāratīya Jyotisa Śāstra'*, Shri S.B. Dikshit has quoted the following passage:

'Navādhikapañchaśataśankhyaśāke Varāhamihirāchāryo divāṃ gatah.'

This passage suggests that Varāhamihira died in Śaka 509 (A. D. 587).

Varāhamihira has given us no less than six works. These works comprise the three branches into which he divides the Jyotisha-Śastra, viz. *Tantra* (astronomy and mathematics), *Horā* (horoscope), and Saṁhitā (astrology).

In his *Pañchasiddhantikā*, Vārāhamihira has preserved some account of five astronomical works, which were evidently regarded as authoritative in his time. These five works or *siddhāntas* are referred to as:

i. *Paitāmaha*,
ii. *Romaka*,

iii. *Pauliśa,*
iv. *Vasishtha* and
v. *Sūrya.*

The first of these belonged to the pre-scientific period, but the other four show a more advanced stage of thought. It has been suggested by some scholars that all these four indicate a knowledge of, if not based upon, Greek astronomy. This seems to be undoubtedly true of the second and third, for though *Romaka* need not be taken to refer to the city of Rome itself, it certainly alludes to the Roman empire in a general sense. The *Paulisa* is also most probably derived from the name of Paulus Alexandrinus. The Surya *Siddhānta,* even in the extant revised form, is said to have been revealed to Sūrya by Asura Maya in Romaka. This may be regarded as an evidence in favour of its western origin or at least the Greek influence. Thus there cannot be any reasonable doubt that the Indians had knowledge of Greek astronomy and were influenced by it. This view is supported by a careful examination of the contents of these works and also by various other considerations.

Although we possess some texts bearing the names of the five old *siddhāntas,* they are all later than Varāhamihirā's time. They are evidently revised versions of the older texts, if not altogether new works under old names. The original texts, whose contents are noted by Varāhamihira, may be placed between A.D. 300 and 500, though some of them are perhaps still order.

Varahamihirā's monumental work on astrology, *Brihat Saṃhitā,* is an encyclopaedia of useful information in various branches of knowledge, such as movements of heavenly bodies and their effect upon men, geography, architecture, preparation of images, excavation of tanks, laying out of gardens. special characteristics of the different classes of women and animāls, jewellery, augury, marriage, etc. The author deals specifically with auspicious times for marriage in two separate works, the *Brihadvivāhapatala* and *Svalpavivāhapatala.* A third work *Yogavātrā* is devoted to omens about expeditions of kings.

Varāhamihira refers to several other astronomers, such as Lāta, Simha, Pradyumna, Vijayanandī and the famous Āryabhata.

3. *Brahmagupta.*

The next writer, whose works are extant, is Brahmagupta. His *Brahmasiddhānta* was composed in Śaka 550 (A.D. 628). His other well-known work *Khandakhādya* was probably composed in Śaka 587 (A.D. 665), which is taken therein as the base for calculations. He also seems to have composed the *Dhyānagraha* in seventy-two verses in the Āryā metre.

Brahmaguptā's work covers briefly the ordinary arithmetical operations, square and cube roots, rule of three, interest, progressions, geometry, including treatment of the rational right-angled triangle and the elements of the circle. It also deals with elementary mensuration of solids, shadow problems, negative and positive quantities, cipher, surds, simple algebraic identities, indeterminate equations of the first and second degree, all in considerable detail and simple equations of the first and second degrees. Special attention is given to cylic quadrilaterals.

4. *S'rīdhara.*

He was a talented mathematician and his name has been referred to by Bhāskarāchārya. One copy of his work *Triśatikā* was in Govt. Sanskrit College Library, Varanasi and another with Rājājī Jyotirvid. The work consists of 300 verses. According to a verse, it is the gist of a voluminous work. Drs. Datt and Singh believe that the work was composed in S'aka 672 (c. A.D. 750). Sri Sudhakar Dwivedi is of the opinion that Śrīdhara also composed *Nyāya-Kandalī*, in Śaka 913 (A.D. 991). According to Dr. Mehendale, he flourished in the eleventh century A.D.

5. *Mahāvīrāchārya.*

He flourished under the partonage of king Amoghavarsha of the Rāshṭrakūta dynasty. *Mahāvīrāchārya* was a Jain. He is believed to have composed his work *Ganitasārasaṃgrāha* in Śaka 772 (A. D. 850).

The work emphasises the importance of its subject for every kind of science from cooking to logic. It adapts in its exposition, the elegance which is later followed by Bhāskarāchārya. The

work is rather elementary as compared to that of Brahmagupta. It introduces geometrical progressions and deals, inaccurately, with ellipses. It has no formal algebra. It gives many examples of solution of indeterminates, but not the 'cyclic method' of Brahmagupta.

6. *Utpala*

Utpala or Bhaṭotpala was a great commentator. He wrote many commentaries on astronomical and astrological works. His commentary on *Brihajjātaka* was written on the 5th lunar day of *chaitra* in Śaka 888 (A.D. 966) and that on *Brihatsaṁhitā* on the second lunar day of *Phālguna* in the same year. He also wrote a commentary on *Laghu-jātaka*. In his commentary on *Brihat-saṁhitā* he has given quotations from several other astronomers. This shows that he was a man of wide learning.

7. *S'rīpati*

He was a great scholar having sound knowledge of the three branches of *Jyotisha*. His known works are: (i) *Siddhānta-śēkhara*, (ii) *Dhīkotikarana*, (iii) *Ratnamālā* and (iv) *Jātaka-paddhati*.

In *Dhīkotikarana*, he makes S'aka 961 (A.D. 1039) as the base for calculations. This shows that he flourished in the eleventh century A.D.

8. *Brahmadéva*

His work *Karanaprakāśa* was composed in Śaka 1014 (A.D. 1092). It is mainly based on *Aryabhatīya*. The work is divided into nine *adhikāras*. A number of items concerning astronomy and astrology have been discussed in it. The work is still very popular amongst the followers of the Mādhva School in South India.

9. ***Satānanda***

He wrote a work called ***Bhāsvatīkarana*** in Śaka 1021 (A.D. 1099). The work is primarily based on ***Sūrya-siddhānta*** of

Varāhamihira. The work must have been quite famous, as it has been referred to by Malik Mohammad Jāyasī in his *Padmāvata*. Several commentaries in Sanskrit have been written on this work. A commentary in Hindi was written by Vanamālī Pandit in A.D. 1428. Its fragments are preserved in the Sarasvatī Bhawan Library of Varanasi.

The work consists of eight adhikāras and discusses, besides other matters, the solar and lunar eclipses.

10. *Bhāskarāchārya*

Bhāskarāchārya (II) was born in Śaka 1036 (A.D. 1114). Four of his works are noteworthy (1) *Siddhāntaśiromani*, (2) *Līlāvatī*, (3) *Bījaganita* and (4) *Karanakutūhala*. The first work was written in A.D. 1150 and the last one in A.D. 1113 The second and third works essentially form parts of the first work.

Two chapters of the *Siddhānta-śiromani*, viz. The *Graha-ganita* and the *Golā*, are supposed to be very valuable writings on Astronomy. *Līlāvatī*, in which a lovely women is addressed and the mathematical problems are posed to her, is based on the works of Brahmagupta, Padmanābha and Śrīdhara. It deals with various combinations.

Bījaganita, which is largely based on Brahmagupta, incorporates the fullest and most systematic account of Indian algebra.

With Bhāskarāchārya ends the active period of Indian astronomy and mathematics.

POSSIBILITIES OF RESEARCH ON THE INDIAN ELEMENTS IN THE HISTORY OF EARLY BORNEO—A STUDY OF SABAH

BY

Dr. D. DEVAHUTI

Reader in History, University of Delhi.

With the equator as its waist line, washed by the Pacific and Indian Oceans which become particularised as the Celebes Sea in the east, the South China Sea in the north-west, and the Java Sea in the south of it, the great island of Borneo lies almost in the centre of the Islands of South East Asia. Economically a source of attraction from the ancient times, specially to Indian and Chinese traders, the Island continues to enrich the three States that now own it, Malaysia, Brunei, and Indonesia with income from pearls and petroleum, rubber and spices. Sabah in the north and Sarawak in the west comprise East Malaysia, the small, oil rich sultanate of Brunei is situated between them and the remainder three fourths of the island under Indonesian government is divided into the three provinces of east, west and south Kalimantan.

In many ways the island remains neglected. Indeed it seems that the ancients realised its importance better than the modern generations do for, the confluences and deltas of rivers, the narrow inlets of the sea and the strategically situated mountain tops have been yielding from time to time, evidence of early political, commercial and religious settlements. But in spite of every indication that the quest would yield results archaelogy is still an exotic science in the island specially for the purposes of ancient history. Prehistory is slightly better served. Nor has the ancient historian studied the tradition, the language, the customs and the beliefs, specially of the now secluded inland tribes, with a view to examining the agglomerations from the past when they lived on the coast and were in regular contact

with foreign peoples. The limited anthropological studies of these tribes do not fulfil the needs for the ancient historian. The Chinese contacts with the region have been better studied thān the Indian connections.

The following report on the existing material and the further possibilities of the study of Indian elements in the early history of Borneo is the result of a preliminary survey made in 1972. The primitive means of communication still obey, sometimes riskily, the pattern of the landscape, of the weather, and of the flow and ebb of tides so that the pace of work is slow, but the gain is greater than the loss in the human relationships that are born of such conditions, specially, in a land of warm hospitality.

The following places were visited:

Kota Kinabalu in Sabah; Bandar Sēri Bagawan in Brunei; Kuching, Santubong and Limbang in Sarawak; and Bandjarmasin, Martapura, Balikpapan, Samarinda and Tenggārong in South and East Kalimantan.

Being an integral part of the land mass of Borneo, Sabah, naturally resembles the rest of the island in the matter of geophysics, flora and fauna etc., but is distinguished in some respects. The highest peak in South East Asia, the 13,455 ft. Mt. Kinabālu is situated in Sabah. It also possesses large quantities of hard workable stone which are lacking in other parts. In Sabah these rocks are concentrated in the north-east specially along the Segama river. This affected the tool making industry of the palaeolithic man. In the late stone age too, the Sabah man produced a very distinctive stone adze, unknown further south.

The first metal to be used in Sabah was bronze, around 500 B.C. Its utility in a thickly forested land was not as great as that of iron which came over a millennium latter but its beauty made bronze and brass articles the prized possessions of Sabahans who often placed them with early coffin burials. Over the centuries an extensive bronze industry flourished in Borneo which produced jewellery and betel boxes, ceremonial lamps and water pots, kettles, jars and gongs, as well as cannons of all sizes.

The connections of the ancient local bronze and brass industry with China, Indo-China, India, Java, Celebes, the Philippines and other parts of the island, specially south Kalimantan, have not yet been ascertained with any exactitude but they do exist, in some cases more directly than in others. Excavations in Sabah have yielded important bronze finds. A bronze axe, 46x37 mm., with a curved cutting edge, and a hollow so that a handle can be inserted fully inside, was found at Pusu Lumut, Tapadong in the east. It is a typical Indonesian axe but the first one whose archaeological level is on record as the 12 18 inch layer. Another find in the same vicinity, that of yart of a mould for casting a bronze tool indicates the localisation of the industry.

The Sabah museum Wooley collection, completed in 1936, has another valuable bronze object, a 53 cm. tall, 28 cm. in diameter across the tympanum, "kettle drum", a collector's piece and therefore not to be accurately dated or placed. However, it belongs to the Dongso'nion tradition and was probably made on the island.

Other less spectacular bronze objects are two small saucer-shapped bowls from Lobang Tingalan in Baturong also in eastern Sabah and most interestingly, the small sheets and slabs of alloy, sometimes pure copper, regarded sacred in Shamanist ritual both by the Rungus Dusun of Kudat district in the extreme north of Sabah and by the Land Dayaks in southern Sarawak. The Sabah museum specimens in the Wooley collection may be compared with similar objects in the Sarawak museum. According to Mr. Benedict Sandin the early history the Land Dayaks in associated with Hinduism and that of the Sea Dayaks or Ibans, with Buddhism.

The mould and the axe from Tāpodong show that casting in early Sabah was done by the *cirē-perdue* or the lost wax method as indeed it is done in present day Brunei. Ancient Indian images were cast both in the hollow, *sushira*, and solid, *ghana* styles, the *cirē-perdue* being termed as *Madhū-chchhishṭa-vidhāna* (मधूच्छिष्ट विधान). The method is described in the Mānasāra, the Vishṇu Saṃhitā and the Mānaso–llāsa in detail. It is still a living art.

The introduction of Iron technology in Sabah occured in a massive way around A.D. 700 and once again is associated with India and China but before long the extraction of iron from stone became an established indigenous industry as is evident from the enormous iron smelting sites in the Sarawak river delta. However, the first appearance of iron in Sabah goes back much earliest an almost paper thin 59x24 mm. spear blade having been found in the same layer at Pusu Lumut, Tapadong as the bronze axe and some fine polished stone tools. This fine blade is almost certainly of special significance. The Tapadong finds make it clear that the three technologies, stone, bronze and iron overlapped in Sabah. Somewhat similar iron blades, some radio-carbon-dated at circa 800 B.C. have been excavated in the Palawan caves in the Philippines. Like the beads this kind of iron, apparently, came from India. In the Philippines, Bali and Borneo have also been found, paper-thin pieces of gold foil which was used for various purposes including that of covering the facial orifices of the dead. The Bali specimen is dated 100 B.C.—A.D. 100 (J.M. B.R.A.S. v 44, no. i, 1971, pp. 71–77). The origin and development of this practice need to be looked into.

From the Gulf of Mergui and the Isthmus of Kra, through the Malay Peninsula, Borneo and as far as the Philippines, there are found at almost every early iron age site the tubular, upto ¾ inches long, orange coloured beads made of glass but nicknamed "*manik tulang*" or "bone-beads" from their resemblance with the earlier neolithic ones made of bone. In Sabah the "*manik tulang*" have been found at Pusu Samang Tas in the Madai region in the south-east. At the same site have also been found the darker and somewhat coarser vatiety of the "*manik tulang*" and the "*labang*", 'hard of hearing'. Both types have been so christened by the Lun Daya Muruts of the Padas who live in south-west Sabah. There are other beads, the small round yellow ones, the so-called "seed-beads" from a burial at Lobang Tingalan at Baturong caves, again found in association with bronze and iron tools. The early glass beads in Sabah belong to any one of the following forms and came from the West, from India and perhaps from adjacent areas:

Small, Round, tubular or in some other simple shape, of one colour, high in silica and sodium content but very low in lead and devoid of barium.

The import from China is ruled out by the fact that early Chinese glass contains large quantities of lead and very often some barium.

A study of the Megalithic cultures of South East Asia of which Sabah is a good representative, in relation to those of India would throw further light on contacts between India and South East Asia.

Not impervious to the late neolithic and chalcolithic, the megalithic cultures generally have the use of iron as their integral element. The erection of monoliths therefore signifies a higher stage of civilization in regions accessible to energising foreign influences. If the concidence of megaliths with advanced irrigational methods be accepted, as suggested by some scholars, the Penampang—Kota Kinabalu plain and the Kelabit plateau prove the point as rice irrigation is most advanced in these two areas on the island. In some areas of South East Asia megalithic urns such as those at Tran-ninh in Laos have in their vicinity polished stone tools, ceramic ware, glass beads and bronze and iron objects. At Xuan-loc fifty miles north-east of Saigon there is a recent megalithic chamber tomb with six granite slabs ten feet below ground level surrounded by a dozen pillars. It is similar to tombs found in the Malay peninsula, in Indonesia and in a related sense in India.

Sabah's megalithic activity is well represented in the thirty miles of Menhirs, with Kota Kinabalu almost in the centre, on the western coast of Sabah. The region is populated by the Kadazans (Dusun of old terminology). But megalithic tradition in Borneo is much more extensive. The Kelabits in the upland of Sarawak about 150 miles further south, have maintained megalithic culture into the modern times. Megalithic activity was also much more intensive in the past but typographical and socio-economic changes have led to the dislocation or disappearance of many monoliths.

Sabah's megaliths are not arranged to form dolmens, cysts, slab graves etc. The megaliths have wooden counterparts to serve the same purpose, namely memorializing acts pertaining to bravery, death, status in society, and distributions of property by the issueless. It is curious that the wooden memorials are not only in the form of human figures but also depict sex. This suggests that the megaliths too, although generally alike, signified

the male and the female through subtle difference in the form and size of the stone. In size the megaliths average between 4–5 feet above ground and about 2 feet underground. They weigh up to one ton. With 3 to 5 faces they have a circumference of 3 to 6 feet. This also varies on the same megalith as they are normally narrower at the top. Sabah megaliths do not bear any decorations in the form of relief and incised figures, symbols etc. In some other parts of South East Asia, however, there were not only indigenous decorative motifs but the continuity of the tradition of erecting megaliths when it met foreign cultural streams at a given point of time led to the depiction of acceptable foreign themes on these stones. A most striking example of the blend of indigenous primitive beliefs and ideologies with parallel foreign myth and symbolism may be seen in the Garuḍa carving on the monolithic obelisk on the sacred 15th century site of Sukuh east of Solo near Jogjakarta.

There was communication between India and South East Asia on the plane of ideas, technology as well as objects. The Indian *Elephants maximus* reached Sabah, and elephant herds still roam in the low-lands behind the coast. Nothern Kalimantan has only a few of these beasts. The Indian elephant is is also to be found in a local sub-species in Sumatra. In Celebes a miniature type elephant evolved. It is now extinct. Java had at least two indigenous varieties of elephants in prehistoric times. The fossils of the later variety date back 50,000 years.

That elephants were more wide spread in early Borneo is evident from the account of the European chronicler Pigafetta who describes the first Iberian visit to the Sultan of Brunei in A.D. 1521. The distinguished guests were taken to the Sultan's palace on elephants. "The king is a Moro and his name is Raja Siripada (Śri-pāda). He has scribes, called Xiritoles who write down his deeds on very thin tree bark."

It is not possible to find out the route or the date of the transportation of Indian elephants to Sabah. There was constant communication among the island countries of South East for ideas as well as objects. At any rate, it was quite common

to transport heavy beasts in early historical times. The Indian rhinoceros and the African giraffes were taken to China.

Sabahan Mythology provides proof of Indian contact, direct or indirect. Normally we depend on oral tradition, genealogies, festival chants, stories supernatural and others to reconstruct the very early stage of development in Sabah but there survives a unique written document among the Idahan of the Lahad Datu district in eastern Sabah which traces their history to early 15th century and throws light on the yet earlier traditions of the land. The translated extracts by T. and B. Harrisson appear in the Sabah Society Journal, volume iv, 1969–1970. It is a manuscript of 140 pages in the Arabic Jawi script consisting of (1) agricultural data, (2) the Idhanan legend of origin and (3) Islamic teachings and prayers. The Idahan genealogy recorded in the second section begins with one Besai of the Kinabatangan river area, whose tenth generation descendant Abdullah was the first to have been converted to Islam in A.D. 1408. Fourteen or fifteen generations after Abdullah bring us to the present times. However, time-reckoning on the basis of generations before the date of Abdullah becomes meaningless in view of the legendary quality of the manuscript which records for the seventh generation three brothers, a human, a dog and a golden deer. This tenor points to great antiquity corroborated by the story that the human brother Apoi was the first to discover all limestone caves of the eastern coast of Sabah. The name of the founder of the race, Besai, is suggestive of the introduction of iron, *bēsi* to the region. The childless Besai obtained a boy and a girl twins from a magical fruit and one of his similarly deprived countrymen Semurong Tegar Kun got a girl from the egg of the *Garuḍa* bird. This girl married Besai's boy and they became the progenitors of the Idahan people. The Kadazans, the Muruts and the Bajaus are also associated with egg genealogies but without the mention of Garuḍa. The bird par excellence of South East Asia, the Hindu Garuḍa, thus occupies a high position in the history of Sabah as well. The golden deer has a place both in Hindu and Buddhist mythology. "Semurong" denotes one of high Hindu birth among the Muruts of the Brunei Bay area. "Maregko" the name of the son of the supernaturally born progenitors of the Idahans has also a similar conno-

tation. Brunei also has its own version of the golden deer story of the Idahans of Sabah. There are many cultural parallels between the two regions, as may be expected. At one time Brunei's political domination extended over a large area including islands in the north. Brunei's political awareness is signified in her diplomatic contacts with T'ang China in A.D. 631.

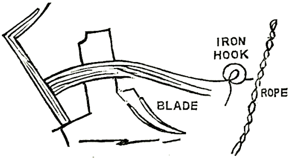
It is not without significance that the features associated with the developing phase of a civilization, the metal ages leading to the introduction of iron technology, the trade in glass beads, the erection of megaliths, advanced irrigational methods and the Garuḍa origin legend, all fit into a coherent pattern. They are evidence, in varying degrees of the strength of India's contacts with early Sabah, the northernmost part of the great island of Borneo. A composite study of these aspects is will almost certainly yield rewarding results. Ethnic movements and common language traits in the two regions should also be examined, simultaneously, not to speak of the similarity in fundamental beliefs and significant rites. Coedes remark in 'The Making of South East Asia' "...... in pre-historic times communications by sea existed, not only between the peninsula and the islands, but also between India and the whole of South East Asia" may be validated by a systematic study, along the lines suggested above, of the evidence at present scattered and not always inter-related.

An Inventory of some Interesting Exhibits in the Sabah Museum.

Sireh (Betel) boxes

The Horn bill bird (Sangang) motif

A plough from Kg. Pimping, Beaufort No. 0674 as in the illustration next page.



A plough from Kg. Pimping, Beaufort No. 0674.

A range of musical instruments

Weaving reminiscent of Indian designs, e.g., the square piece no. 1460. Until recently when a frame loom very similar to that used in pre-Columbian Peru (except that the latter is a flat not a circular loom) was the only loom used in Sabah.

Kēris (Dagger) with wavy (nāga) blades. Some with bird beak (Garuḍa head) motif.

An early middle-eastern, probably Arab jar originally used for water storage on sea. Locally used by the Kadazans in the Penempang area as a sacred spirit jar.

A "wooden megalith" with carved female statue from Kampong Tampasuk. It is associated with property inheritance, and was erected on land belonging to a widow with no children.

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THE RĀMĀYANA AND MAHĀBHĀRATA IN GREATER INDIA

BY

P. S. VENKATASUBBA RAO, M.A.,

Historians use the term "Greater India" to denote the countries in the Far East with which India had contacts from very early times. The name, "Greater India", is significant for it presents a pageant of South-East Asian history of enterprising mariners, merchants and emigrants, who were later followed by a large number of priests, pilgrims, learned Brahmins, missionaries and men of letters. When they went to "Greater India" they carried with them their culture which came to be implanted in the countries where they settled down on a pre-Hindu population, who on this account, should by means be regarded as utter strangers to civilization. While different parts of India participated in this exodus at some time or other, South India is held to have surpassed the rest. Scholars have attributed various causes for these emigrations. They are, maritime activity, prompted by the construction of ships, the missionary zeal of the preachers, the attraction for gold in the *Svarnabhumi*, the Eldorado of the Far East and to a greater extent than the rest, the commercial impulse. This Hinduization which began some centuries before the beginning of the Christian era, gathered momentum in the second and third centuries, fructified fully in the fourth and fifth centuries and began to decline after the thirteenth century. The impact of these movements of culture, not by military conquest but by a slow, steady and peaceful penetration could be seen in arts and architecture, dance and drama including shadow and puppet plays, language and literature, religion and philosophy, sculpture, music and folklore. Vestiges of this inheritance survive to this day.

The Rāmāyana and the Mahābhārata, the twin epics of India, particularly the former, have left their indelible impress in this

long process of Hinduization on the many facets of culture of the Far East.

Epigraphy throws unmistakable light on the ancient currency of the Rāmāyana and the Mahābhārata in various places. One of the inscription of Prakāśadharman of Champa (650-679 A.D.) records the construction and dedication of a temple and image to Vālmīki at Trā-kien, near Simhapura, the most ancient capital of Champa. It reads:

yasya śōkat samutpannam ślōkam Brahmāpi pūjati
Vishṇoḥ pumsaḥ pūraṇasya mānuṣasyātmarūpiṇaḥ

* * *

Kavērādyasya maharṣer Vālmīkis śruriha
Pūjāsthānam punastasya kṛta[1]

It will be seen from the text of this inscription that Vālmīki was looked upon as an incarnation of Vishnu and the sloka he uttered in grief is obviously an echo of the ślōka in the Bālakānda of the Rāmāyana (Sarga II-15): Mā nishāda pratishtām.........It should also be noted that the words "punastasya kṛta" in the inscription speaks only of the renovation of pūjāsthanam (temple) and not a new construction. This, therefore, implies that the Rāmāyana should have been known in Champa much earlier than the time of Prakāśadharman. In another undated inscription at Myson,[2] the same Prakāśadharman is said to have built a temple to Kubera Ekāshapingala. The inscription contains slokas which refer to an incident mentioned in the Uttarakhānda of the Rāmāyana. The incident is the story of Kubera losing his left eye by casting it on Pārvatī and his performance of Rudra Vṛta when Śiva and Pārvatī appeard before him. In yet another inscription[3] of 658 A.D. Prakāśadharman is compared to Rāma for his nobility and valour. There is also a sixth century inscription in Cambodia which mentions one Śrīśomasarman, a Brahmin, who made a gift of the

1. B.E.F.E.O. (Bulletin de la Ecole Francaise de Orient), XXVIII, p. 148 cited by Prof. K. A. N. Sastri in the *Journal of Orienta Research*, Vol. VI, 1932, p. 117.

2. *Ibid* IV p. 128 cited by Prof. K. A. N. Sastri in *South Indian Influences in the Far East.*

3. *Ibid* p. 920.

texts of the Rāmāyana, Mahābhārata and Purānas to a temple together with arrangements for their recitation.[4] There is a reference to the Mahābhārata in another inscription of A.D. 657 of Prakāśadharman which mentions the legend of the foundation of the Kambhoja kingdom. A certain Brahmin, Kaundinya by name is said to have got a javelin from Aśvatthāma, the son of Droṇa and pitched it one the site of his future capital. A corrupt version of this legend appears in the report of an early Chinese envoy which says that a certain Houen-t'ien (Kauṇḍinya) married the woman ruler of Fu-nan, Lieou-ye, and became the master off that country.[5]

There are various versions of the Rāmāyana in Greater India. The Rāmāyana legends have been studied by many scholars to compare them with the Indian version of the story and find out the divergences in the respective accounts. Dr. Stutterheim who has made a detailed study of these versions is inclined to believe that they are for the most part based on non-Vālmīkian versions. But he finds it difficult to trace the source of the Javanese version. "He only reaches the rather vague conclusion that in this matter eyes should not be turned exclusively to South India but Western and Eartern India also".[6] There is the *Daśaratha Jātaka*[7] in which there is no mention of either Rāvaṇa or Laṇka; Rāma and Sita appear here as brother and sister and become husband and wife in the end. The existence of a Chinese version of about 472 A.D. closely resembling the *Daśaratha Jataka* was pointed out by Prof. Sylvain Levi in 1903. A monk of Sodigana of the third century A.D. translated into Chinese some Jātaka stories which, though they do not mention the names of the characters in the Rāmāyana contains with some deviations the main episodes of the epic. Professor Huber discovered this collection in 1904. Next year the same Professor drew attention to an Annamite

4. Dr. Valentina Stache, a German Research scholar in the report in *The Hindu* dated 21-1-73 of the Proceedings of the All-India Rāmāyana Conference at Trivandrum.

5. K. A. N. Sastri: *Śri Vijaya*, pp. 19-20.

6. K. A. N. Sastri: *South Indian Influences in the Far East*, pp. 132-33.

7. Fausboll: *The Jataka*, IV, pp. 123-30 (No. 461) cited ip the *Journal of Oriental Research*, Vol. VI, 1932, p. 114.

legend called "The King of Demons" which speaks of "Ten-heads" and "Ten Chariots", obviously references to Ravana and Dasaratha, the abduction of Sīta and her subsequent restoration. Six fragments of Tibetan Rāmāyana mauscripts have been discovered at Tun Huang; pictorial represantations of the epic in Tibet are mentioned in *Chitralakshna*, a work translated from Sanskrit into Tibetan.[8] These Tibetan versions, however, in the opinion of Prof. F. W, Thomas, who assigns them to a period between 700 and 900 A.D. do not correspond to the Indian version. He observes: "In any case, we have in these documents testimony to the early currency of the popular Rāma narratives following the general lines and scale of Mahābhārata, and departing freely from the classical version of Vālmiki."[9] King Rāma I of Thailand wrote the "Ramkien" in 1798 which contains the earliest complete version of the story. It was probably based on earlier versions which have been lost.[10]

The influence of Rāmāyana could be seen in many centres in Indonesia in her art and architecture. The chapel royal of the temple of the Emerald Buddha in Bangkok is adorned with mural depicting scenes from the Rāmāyana. Jayavarman VI of Cambodia constructed in the eleventh century the Baphunon, a temple of the *prang* type of enormous bulk situated north-west of the Bayon and south of the palace. "The present remains consist of the usual pyramid of threee receding terraces, the two upper with Mahābhārata and Rāmāyana reliefs". The Angkor Vat sculptures cover low reliefs illustrating Hindu epic mythology, battle scenes from Rāmāyana and the Mahābhārata, These reliefs, observes Ānanda Coomāraswāmi are spiritually greater than those Borobodur.[11]

Borobodur in Java, another product like the Ankor Vat of Cambodia of Indian genius contains a "continuous series of reliefs on the inner side illustrating the earlier portion of the Ramayana. The reliefs of the Vishnu temple illustrate the Krishna cycle. The

8. *Ante* The report in *The Hindu* dated 21-1-73.
9. *Journal of Oriental Research*, Vol. VI, 1932, p. 117.
10. *Ante*, The Report in *The Hindu.*
11. *History of Indian and Indonesian Art*, pp. 190 and 193.

lower terraces in the temple of Panataran in East Java are decorated with alternate medallions and reliefs illustrating the Rāmāyāna, the upper with a continous frieze illustrating the Krishnaya. All these reliefs are designed in a heroic and grotesque wayang-like style".[12]

It was Rabindranāth Tagore that observed that Lord Siva gave his dance to Indonesia and left India with his ashes. The Indian influence on their dances and dramas in terms of the Rāmāyana and Mahābhārata are evident in Japan, Thailand, Laos, Cambodia, Burma. Java, Bali and Ceylon. "Throughout all South-East Assia", writes Faubion Bowers, "you can still hear these same stories and incidents (from the Rāmāyana and the Mahābhārata) being recited and you will see the main episodes being danced everywhere".[13] The masks and movements of the Bugaku dance of Japan manifest the Indian affiliations. In Okina, a very old Japanese dance, one hears in the invocatory ceremony Sanskrit phrases; the structure and themes of the dramatic arts draw upon the Rāmāyana and the Mahābhārata. The latter is called Brta Yudha in Indonesia and the former is pronounced in an unrecognisable way in Cambodia. The stories and characters in their dances and drama are from these epics. In Thailand the dancing Rāma is called Buddha and Rāvana becomes a giant or demon. At the Jāvanese courts of the Sultan of Jogjakarta, the palace dancers enact battle scenes between the Pāndavas and the Kauravas of the Mahābhārata. One of the most exquisite of the love dances is the Asmaradana or love fulfillment from the Mahābhārata relating to Arjuna, the suitor of Sembodro. The texs of the Khon (a masked play of very old theatrical form) of Thailand, stories of which are euclusively from the Rāmāyana, are highly Sanskritised. The Rāmāyana to the Thais is a simple story, a fairy tale which neglects the religious aspect. The Siamese Sida none else than Sits, whose abduction is frequently performed. Rāvana is called Thosakan who is involved in many intrigues and animal battles, and Hanumān, indulging in many monkey-like acts is portrayed as encountering many adventures during his journey to the nether world to reach Rāma and rescue him from the effects

12. *Ibid*, pp. 206 and 209.

13. *Theatre in the East*, p. 14.

of a magic spell cast on him by Rāvana.[14] The Lakon, which are stage versions of stories, has latterly displaced the Kon play and unlike the latter incidents from sources other than Rāmāyana are drawn upon. The troupe dancers in the palace of the king of Loas perform in fine Bangkok style the old legends from the Rāmāyana. In the masked plays of Burma the villain Rāvana assumes a comic role and "however wicked he may be according to the plot, the actor must turn him into a delightful, laughable and even harmless character".[15] A curious distortion of the Rāmāyana is seen in a popular play-interlude of Ceylon in a demon exorcizing ceremony entitled "The Killing of Rāma" where he is mistaken for a thief, is beaten to death and the gods taking pity on him finally brings him back to life.[16]

There has been some discussion and controversy as to the origin of the many forms of the Wayang (shadow plays, mask plays, pantomime). The emphasis on its Indonesian origin gave way to the Hindu influences when Pischel drew attention in 1906 to the Chāyānātaka (shadow play) of India.[17] Since then scholarly opinion has swung in favour of their Indian origin; for Mr. Amin Sweeney writes: "It should be noted that South-East Asia, the areas in which the shadow play exists have all at some time in their history been under the influence of Indian culture. Further some recent studies of the Indian shadow play, both classical and popular, increase the likelihood that it is in India that we must seek the origin of the shadow plays of South-East Asia".[18] In a brief survey of the repertoire of these plays, Mr. Amin Sweeney points out that the "major source of the repertoire of the *Wayang Siam* is the tales of Rāma, reincarnation of the god Vishnu, based on the great Hindu epic, the Rāmāyana...........In the *Wayang Siam*, a tree metaphor is often used to distinguish between the various parts of the tales of Rāma. The basic part, regarded as the roots trunk

14. *Ibid* p. 138.

15. *Ibid* p. 15.

16. *Ibid* p. 14.

17. K. A. N. *Sastri*: *South Indian Influences in the Far East*, p. 132.

18. *Malay Shadow Puppets*, published by the Trustees of the British Museum, London, 1972. This book covers many aspects of shadow puppet plays and carries a number of very good illustrations.

and branches of the tree, is known as the *Cherita Mahārāja Wāna* (The Tale of Mahārāja Rāvana) and relates the story of the abduction of Rāma's wife by the ogre Rāvana and Rāmā's quest to rescue her. There is then a great mass of minor stories referred to as 'twig' (*ranting*) stories. Wide variation occurs in the content of ther repertoire............The predominent influence in these minor tales is that of the Malayo-Javanese *Panji* cycle of stories".[19] Occassionally stories from the Mahābhārata are also performed. The tales of Rāma in basic part of the repertoire are held by the *dalang* (announcer) is inviolable. They are believed implicitly. The chief characters and the basic events as given given in Mr. Amin's book[20] conform in the main to the Indian version of the Rāmāyana.

Indian music appears to have had its impact on Javanese music. The latter has two scales, the *slendro* and *pelog*. The slendro is connected with the Rāmāyana and Mahābhārata and the Pelog with the Indonesian Panji stories. Prof. Kunst is of the view that the origin of the *slendro* scale is ultimately from India.[21]

It will be seen from the above survey how the Rāmāyana and Mahābhārata hold an unshakable grip on the whole of Greater India. To the people there, Muslims and Hindu alike, as the German scholar mentioned before observes,[22] the Rāmāyana is a living tradition. The heroes of the Indian epics are familiar to every child in Javanese villages through the Wayang performances and they are regarded as models of models of conduct.

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19. *Ibid*, pp. 57 ff.
20. *Ibid*, pp. 65–80.
21. K. A. N. Sastri: *South Indian Influences in the Far East*, p. 134.
22. *Ante* The Report in *The Hindu*.

A RARE POTSHERD (ROULETTED WARE) INSCRIPTION* FROM ARIKAMEDU

BY

A. SWAMY, M.A., B.L.,
Lecturer in Archaeology,
University of Madras.

Arikamedu, the ancient sea-port town 8 k.m. south of Pondicherry on the east coast line, came to the limelight of South Indian arechaeology and history ever since it saw, in 1945, Sir Mortimer Wheeler's spade which unravelled some of the riddles that, till then, loomed large on the cultures of South India. "The most significant result of these Excavations", in the words of the excavator himself, "is that by establishing at last the precise chronological position of an extensive South Indian Culture, the archaelogist has provided a new starting-point for the Pre-medieval civilization of the Indian Peninsula".[1] Apart from corroborating certain of the cultural ramifications portrayed in the Sangam literatute, such as the maritime trade that this ancient sea-port town (Proleny's 'Poduka') had with foreign countries, particularly the Mediterranean world, it shed a side-light on the script and the language of the people then in vogue in this part of the peninsula.

No doubt, the use of a local form of the Asokan Brahmi, known as *Dālmiḻi*,[2] (the earliest extant medium of writing in the Tamil country during the period, viz. 2 centuries before and after the Chris-

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*This find was found out by the author from the section of the river bank at Arikāmēdu in the course of his recent exploration. The present paper was read on 19-9-73 at the inaugural meeting of '*Varalārru Pēravai*' Madras.

1. Wheeler R.E.M. *Ancient India*, No. 2. 1946. p. 17.

2. Mr. I. Mahadevan calls it by the name, Tamil-Brahmi, which term has been adopted in the present paper for the sake of consistency.

tian era) became evident from the rock-shelter inscriptions of the Tirunelveli and Madurai Districts. But these cave inscriptions were dumb to the pertinent question posed by a section of the South Indian scholars as to whether this so-called Tamil Brahmi script was restricted to the lone use of the monks of heritical faiths, viz. Jainism, Buddhism or to the Ājivikas, who migrated from the north and with whom these caves were associated, or was it the script of the masses. The numerous potsherd inscriptions encountered in excavations at the leading centres of archaelogical/historical importance set at rest, convincingly though not conclusively, this controversy. In this regard, Arikāmédu occupies a unique status by yielding, for the first time, a score of such potsherd inscriptions. As a matter of fact they provided the sheet-anchor for fixing the chronology of the early Tamil-Brahmi Inscriptions. Arikamédu was subsequently followed up by two from Alagari, five from Uraiyur (Trichy Dist.) about a score from Kancheepuram (the last three sites were excavated by the Department of Ancient History and Archaeology, University of Madras) and about 15 from Korkai, and recently some from Karur. The writings on these potsherds should pertain, naturally, to the individuals who owned and used those pottery vessels which had been the common man's property from time in memorial. In all these cases, the Tamil-Brahmi script has been invariably used. Hence it is surmised that the Tamil-Brahmi script was current with a wider circle than as it was once suspected, among people of other walks of life and was used for secular purposes too.

The potsherd inscription under study is yet another feather to the distinction of Arikamédu. Though a fragmentary one, on a tiny piece of pottery consisting of only four full Tamil-Brahmi letters a portion of the fifth letter, the present find elicits a special interest and is significant at least from three points of view viz. (1) It is the first of its kind in the Tamil Country in which the Tamil-Brahmi letters are found inscribed on a variety of ware attributed to be of the Mediterranean origin, (2) The letters are found on a well-dated ware and as such it provides a more secure base for dating the Palaeography of the letters with a fair amount of precision and within a very narrow chronological limits as that of the dated ware itself, and (3) certain Palaeographical features of this inscription, particulary the dots known in Tamil as *puḻḻi*

appended to two letters supply yet another archaeological data for determining the antiquily of *'Tolkappiam'*, the earliest extant treatise on Tamil grammar.

The Sherd:—A Rouletted Grey ware.

The sherd on which the inscription is found is almost of a triangular shape with the three sides measuring < 2.5 cm. × 2.5 cm. × 4 cm. and is thin sectioned with a thickness of 0.35 cm. It is made of a well-levigated fine clay, well burnt, fired under the reducing conditions of the kiln, and has almost a metallic ring. The two surfaces and the section of the sherd are grey in colour. The black patches on the two surfaces indicate that both sides were treated with a black slip and was burnished. On the exterior bottom surface is found the deep-cut inscription indicating thereby that the letters were inscribed before firing with the aid of a pointed instrument.[3] The interior has a more smooth surface and is decorated by a band of eye-shaped designs in the rouletted pattern (a mode of drawing at the quick wheel by a machine-like contrivance called roulette). The inscribed sherd belongs to the category of pottery known as the Rouletted Grey Ware (so called after the rouletted pattern) and its features tally well with Type 3 of Mr. Krishna Deva's classification.[4] The sherd which is flat all round is, undoubtedly, a fragment of a dish, the characteristic type-shape of the Rouletted ware.

The credit of recognising, the Rouletted ware for the first time in India goes to Arikamedu where Wheeler noticed it in association with the imported (Italian) Arretine ware of 20–50 A.D, Till recently only three other sites. viz. Chandravalli and Brahmagiri (Chitaldrug Dist.) in The Mysore State and Amarāvathi (Nellore Dist.) in the Āndhra Pradesh were known to have yielded sherds of this ware. Later on, they were encountered in the excavations at a few other leading centres of historical importance, such as Uraiyur (Trichy Dist.) Kancheepuram (Chingleput Dist.) Kaveripattinam (Tanjore Dist.) Korkai (Tirunelvelli Dist.) in Tamilnadu, at Salihundam in Andhra Pradesh, Sisupalgarh in

3. A Microscopic examination of the sherd confirmed that the letters were inscribed before firing.

4. *Ancient India* No. 2. 1946. p. 46.

Orissa, Tamluk (Midnapur Dist.) in Bengal, Nasik and a stray sherd in the far north west at Jhukar in Sind.

The Rouletted Ware: Whether Imported or Indigenous?

By the very conspicuous brilliance and superiority in its fabric texture, shape the fine finish and above all the rouletted pattern with which the were is decorated, coupled with its association with the truly imported Italian Arretine ware sherds, both at Arikamédu and Chandravalli, Wheeler has grouped the Rouletted ware with the varieties of the imported Mediterranean wares of the early centuries of the Christian era. Nevertheless, a ray of doubt was sparked by Mr. Krishna Deva, the author of the Arikamèdu report relating to the Rouletted Pottery section, by saying that "it was not yet possible to ascertain whether the Rouletted ware itself was an imported variety or not."[5] A similar doubt has been expressed by Dr. R. Subramaniam (of the Archaeological Survey of India) at Sālihundam. The latter is inclined to attribute the nativity of this ware to the Indian soil as opposed to its foreign origin, basing mainly on the occurrence of the sherd of this variety in profuse quantity and also because of the great number of them bearing Brahmi inscription,[6] palaeographically datable to a period from 3rd Century B.C. to 4/5 Centuries A,D. In fact a very large number of the sherds encountered at these various sites were crude in nature and poor in workmanship betraying their local origin. Wheeler, on the oter hand, considers that the rouletted ware "whether actually imported or not shows foreign influence" because the rouletted pattern, according to him, "is not an Indian feature and is certainly derived, like the associated Arretine, from the Mediterranean" and that "the better examples are doubtless imported and the cruder varieties seen to be local imitations."[7] Though the question of the true origin of of the rouletted ware has become more and more controvercial, the present sherd, which is of a much finer variety tolerably comparable to the supposed imported ones, is one which was definitely manufactured in India as evidenced by the Brahmi letters found

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5. Krishna Deva: *Ancient India* No. 2. p. 45.
6. R. Subramaniam: *Sālihundam.* 1949, p.
7. Wheeler: "Ancient Peoples of Early India and Pakistan" 1959. p. 33.

thereon incised, beyond doubt, before firing. It is thus obvious that there flourished in South India round about this period a ceramic industry of this variety imitating the imported rouletted pottery, if at all such a ware was really imported.

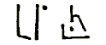
The Datei

The rouletted ware recovered at different stratigraphic levels in the sites referred to *supra*, save Amarāvati and Sālihundam, has been dated to 50 A.D.[8] This dating was confirmed at Chandravalli in northern Mysore, where a *denarius* of Tiberius dated A.D. 26–37 was found with closely derivative pottery and near actual rouletted sherds. At Arikamédu this ware was found in association with the imported Roman Arretine ware, and it "both preceded and outlasted the Arretine ware by an appreciable margin". The first appearance of the rouletted pattern is considered to have been "as early as the end of the first century B.C. or the beginning of the first century A.D.", while its terminal date is determined by the latest occupation in Southern Sector of the town, attributable to C. 200 A.D."[9] The validity of this dating of the ware has been seriously questioned by Dr. R. Subramaniam at Sālihundam excavations where a number of sherds (of which he enumerates only 8 sherds) bear Brahmi inscriptions paleographically assignable to a period from 3/2nd Century B.C. to the 3/4th Century A.D. Taking paleographic evidence alone into account Dr. Subramaniam recomends that the duration of the prevalence of the rouletted ceramic industry in India has to be revised as C. 2nd Cen. B.C. to 3/4 Cen. A.D.[10] The same disparity of date between the Archaelogical and Epigraphical data as obtained in the Sālikundam excavation was confronted earlier in Arikamedu also. But the contradiction in the archaeological and epigraphical evidences has been explained away by Dr. N. P. Chakravarti, who studied the Arikamédu inscriptions.[11] Dr. R. Subramaniam himself has admitted that the contradiction between the two sources is "more apparent than real".[12] In the case of Arikamédu, the question as to whether

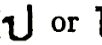
8. Wheeler: *Ancient Peoples of Early India and Pakistan*, p. 32.
9. Krishna Deva: *Ancient India*, Vol. 2. p. 46.
10. Dr. R. Subramaniam: '*Sālihundam*' 1964. p. 9.
11. N. P. Chakravarthi: A. I. Vol. 2. p. 109.
12. Dr. R. Subramaniam: '*Sālihundam*' p. 22.

the rouleted ware was in vogue for a longer period or not, does not arise all all since the occupation thereon ceased to exist after c. 200 A.D. As such the present sherd should be assigned to a date not later than 200 A.D. When fixing the date to this sherd, two factors are to be taken into account viz. (i) the observation made by Mr. Krishna Deva relating to this ceramic industry, in whose words, the rouletted ware "became less popular after the middle of the first century A.D."[13] and (ii) that the inscribed sherd in question was picked out by the author from the section of the river bank at the Northern Sector, where occupation is said to have lasted only upto the middle of the 1st Century A.D. On the basis of the findspot of this sherd and its fine quality coupled with Mr. Krishna Deva's observation on the less popular trend in the use of this ware, the sherd can be safely dated to the first half of the I Century A.D. or even to the last quarter of the Ist Century B.C.

The Inscription:

The letters that occur on the sherd are in Tamil-Brahmi or *Damili* characters and they were incised before firing. The symbols in the first line run as  and the one in the second line as (Fig. 1 of the plate).

Before one attempts to make out what these symbols stand for, it is quite essential to take note of the fact that the two dots appended to the respective symbols on the top line are too prominent to be ignored as accidental and unrelated to the symbols concerned. An examination under a Binocular Stereo Microscope revealed that the morphology of the two dots synchronizes with those of the other symbols, that their placement are not accidental but intentional and that they from part and parcel of the symbols themselves.[14]

The first symbol —Apparently, it bears close resemblance to two early Brahmi letters viz. *la* (or) and *pa* (). That *la* in form was prevalent in the early centuries of

13. Krishna Deva: A.I. No, 2 p. 46.

14. The find was examined by the author and Dr. B.G.L. Swamy, Chief Professor of Botany, Presidency College, Madras by using the instrument and the latter confirmed the observation made above.

the Christian era is evidenced by the early Brahmi inscriptions.[15] It is also similar to the letter *pa* as the one met with in the Araccalur Inscription, but identifying this symbol with *pa* appears far-fetched if one looks at the symbol (the one in the second line of the present inscription which is more akin to *pa* of this period). Again it is grammatically repugnant to the next letter *tu* as it is so identified by the author. The significance of the dot on the top side of its right arm, which is not accidental, is to be ascertained before the symbol is identified. The *Tolkāppiam,* the earliest work on Tamil grammar enumerates the cases where the dot or *puḷḷi* is appended to the Tamil letters.[16] To three categories of letters viz. vowels, pure consonants, and secondary letters were dots affixed. That all the Tamil 18 pure consonants bore the dot is made known by Sutras 15 and 104 [17] Applying the norms of *Tolkāppiam* this symbol may be read either as the pure consonant of *pa* or that of *la.*

A closer examination of the symbol, (vide Fig. 3 of the Plate) however, reveals that there is significantly a gap between the bottom end of its right arm and the rest of the symbol, suggesting thereby that it is to represent two separate letters. In that case, the first among the two is the Vowel *u* and the next vertical stroke with a dot is *ra* in its pure consonantal form giving rise to the word *ur* (உர்). As to how this is to be read as *ūr* (ஊர்), a Tamil word, is discussed *infra.*

The next symbol is a hard nut to crack and poses really a tough problem for an easy identification since a similar type has not been so far confronted in the earlier Tamil Brahmi inscriptions. The author considers that it consists of two distinct letters placed one below the other in an unusual manner. The one on the top resembles *ta* ( ) and the other at its immediate bottom is akin to vowel *u* ( ). The symbol representing the vowel *u* is, of course, found in a slightly different from that of the known early Brahmi inscriptions where it is similar to the first letter of the

15. e.g. Tirupparankundrum Inscription: I. Mahadevan's 'Corpus' No. 51
16. *Tolkāppiyam*: *Eḷuttu*: Sutras 2, 13, 14, 15, 16, 17, 23, 24, 25. 28, 98, 104 and 105. relate to the application of dots.
17. *Eḷuttu* 15. "மெய்யின் இயற்கை புள்ளியொடு நிலையல்".
meyyiṉ iyaṟkai puḷḷioṭu nilaiyal
104. "மெய்யீற் றெல்லாம் புள்ளியொடு நிலையல்".
meyyīṟṟu ellām puḷḷioṭu nilaiyal

present inscription, and its vertical line is more elongated than the horizontal or base line. On the other hand, the tendency towards a shortened vertical line is noticed in the inscriptions of the 4th—5th Centuries A.D. and in the later 8th—11th Centuries A.D. (Pallava-Cola inscription) where vowel *u* symbol has a long base line as that of the present one. The long base in the present case has a specific function about which is said in the following pages.

Mr. R. Nāgaswamy, who had the occasion recently to examine the present inscription, is inclined to identify this symbol as *va* perhaps on the basis of the forms (,) found in the inscriptions of the Śātavāhana period (2nd Century A.D.). His assumption is that the bottom stroke has a missing link with the upper one. His identification is not convincing to the author for the following reasons: viz. (1) There are fairly wide gaps at both ends of the symbols concerned, the gap being much wider at the left end. (2) The angle of the vertical line in *u* like symbol ( ) is inclined more towards the left hand direction than towards the symbol *ta* (upper symbol) (3) Again, had the scribe who incised these letters, really intended to give the form of *va* either in this or manner it is not understandable as to how a scribe, who had executed such a beautiful curve in a single stroke as that of the letter in the next line, could have failed to give or shape in the same stretch, particularly on a soft and smooth material like that of the present potsherd, and that too when it was in a wet condition? All these points of approach are negative in character which, however, eliminate the possibility of this symbol representing *va*. As a matter of fact they eliminate the chances of the symbol representing a single letter at all. And finally the presence of the *puḷḷi* which, as has been repeatedly stressed, is not an accidental one but forms part and parcel of the letters concerned, and in a way, has a direct bearing on the letter to which it is appended and it supplies a positive clue to unravel the riddle connected with it. It strikes the key-note, if it may be said so, to the proper identification of the symbol itself.

The next question that arises, as a necessary corollary, is as to which letter the dot is appended. If it really relates to *ta*, it should find a place normally at the right side of the consonant either at its top or in the middle (as or just like the one in

the second letter *r* (˪') of the present inscription) and not at the bottom. It relates, in all probability, to the one at the bottom *u* and this presumption gains ample support from Sutra 2 of *Tolkāppiyam.*[18] Three letters viz. *i* (இகரம்), *u* (உகரம்) and *ah* (அகரம்) had the dots appended to. Such practice is made much more clear by Sutras 104 and 105.[19] Words like *kokku, nādu, varahu* were written in the days of Tolkappiyanar with a dot placed on the top of *u* vowelled consonants as கொக்கு, நாடு, வரகு.[20] Hence the dot in question is deemed to pertain to the bottom *u* symbol indicating its short form. The peculiar long bass-line of *u* in the present case, a deviation from its normal form with short base-line, has a definite purpose to serve and it is intended, perhaps, to cover up the entire stretch of the top letter *ta* with which the vowel merges.

Having identified these two symbols individually, their connection *vis-a-vis* is to be established. It has been pointed out by some writers, like Dr. T. V. Mahālingam that the practice of writing vowelled consonants by means of two separate letters has been confronted occasionally in the early Brahmi inscriptions of the Tamil Country. Instead of the single letter i.e. "consonants with the addition of symbols indicative of medial vowel, the vowelled consonants are written as two separate letters with the pure consonants and the basic vowels forming side by side,"[21] For example to denote *yu* (Ꮜ) the symbol *ya* (Ш) stands first and the vowel *u* (L) next as ШL. Similarly *nu* is written as ⊥L. In the present instance, the positioning of the *u* basic

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18. *Elutlu—2:* "அவைதாம்
குற்றிய லிகரம் குற்றியலுகரம்
ஆய்தம் என்ற
முப்பாற் புள்ளியும் எழுத்தோரன்ன."
avaitām
kuṟṟiyal ikaram kuṟṟiyal ukaram
āytam eṉṟa
muppār puḷḷiyum eḻuttōranna

19. *Elutlu—104:* "மெய்யீற்றெல்லாம் புள்ளியொடு நிலையல்"
(meyyīṟṟ ellām puḷḷiyoṭu niliyal)
105: "குற்றியலுகரமு மற்றென மொழிப."
(kuṟṟiyal ukaramum aṟṟeṉa moḻpa).

20. M. Raghava Iyengar. *Ārāychchi Tokuti*, 1964. P. 125.

21. T. V. Mahalingam: *Early South Indian Palaeography*, 1967. p. 121.

vowel is different and it does not find place on the side of the consonant *ta* but at its direct bottom, perhaps a new convenient device invented with a view to distinguish a vowelled consonant from other such combinations.

The prevelance of the new system as found in the inscription under study is not noticed in the early inscriptions hitherto known but it is hinted at in the *Tolkāppiam* which incidentally elucidates the forms of certain unusual letters then in vogue. Sutra 17 of *Eluttatikāram* contemplates the transformation a consonant undergoes when it merges with vowels other than *a*.[22] A basic consonant (with dot) when it merges with the vowel *a*, the resultant form of the vowelled consonant does not vāry from that of its original consonant but for the disappearance of the dot, whereas its form becomes varied when the basic consonant merges with other vowels. In this context Nachinarkiniyar's comment on the Sūtra is pertinent. The commentator explains that the resultant altered form of a vowelled consonant is effected by such means as those of bounding the consonant as if chained (*vilañku*) or by the addition of a straight stroke or line (*kōḍu*) or by a dot (*puḷḷi*) or by both a line and a dot (*kōḍu* and *puḷḷi*).[23] The three distinct words, *vilañku, kōḍu, puḷḷi,* are quite illuminating and deserve special attention taking into account the true connotations of the respective words used by the commentator in their proper perspective, particularly the word *vilañku*. Though the word ***vilañku*** is understood to have been used in different senses at

22. *Eḷuthu:* 17. மெய்யும் உயிரும் கூடிப் புணருமாறும் அவை திரியாதுந் திரிந்தும் நிற்குமாறு கூறுகிறது.

"புள்ளியில்லா யெல்லா மெய்யும்
உரு வுரு வாகி அகரமோடு உயிர்த்தலும்
ஏனை உயிரோடு உருவு திரிந்து உயிர்த்தலும்
ஆயீரியல உயிர்த்தலே."

puḷḷi illa ellā meyyum
uru-v-uru-vāki akaramoṭu uyirttalum
ēnai uyirōṭu uruvu tirintu uyirttalum
ā-yīriyala uyirttalē.

23. "உருவு திரிந்து உயிர்த்தலாவது, மேலும் கீழும் விலங்கு பெற்றும், கோடு பெற்றும், புள்ளிபெற்றும், புள்ளியும் கோடும் உடன்பெற்றும் உயிர்ந்தலாம்."

(*uruvu tirintu uyirttalāvatu, mēlum kīḻum vilañku peṟṟum, kōṭu peṟṟum, puḷḷi peṟṟum, puḷḷiyum koṭum uṭan peṟṟum uyirttalām*).

different periods,[24] by the time when Nachinārkiniyar wrote his commentary (14th century A.D.) it should have attained the sense indicative of anything in fetters, confinement or restricted movement, In *Sudāmani Nikandu* (16th century A.D.) it is used to denote *taḷai* intended to bind the hands and legs of a person by a chain. In the case of a letter the term *vilañku* might have been used to indicate the letter being bounded, enclaved or encompassed by another symbol in the manner of a chain or a (hand) cuff either at its top or at its bottom. Quite illuminating are Nachinārkiniyar's illustrations on this point. According to him the vowelled consonants *ki, kī, ku, kū,* in the days of Tolkāppiyar had *vilañku.* In the case of *ki* and *kī*, the *vilañku* was on its top, whereas *ku* and *kū* had the *vilañku* at the bottom.[25]

The manner in which vowel *u* is found placed in the inscription under study just at the bottom of the consonant *ta* as if in *'vilañku'* and embrasing the consonant, tallies surprisingly well with Nachinārkiniyar's above comment and the illustrations following it, reminiscent of the practice prevailing in the days of Tolkāppiyanār. Under these circumstances, the symbol is to be taken to represent the vowelled consonant *tu* (*t*+*u*). In the opinion of the author this system, the first of its kind, provides more or less a connecting link with the later forms of the vowel *u* as a medial sign indicated variously as , , , . These signs are commonly met with in the inscriptions from the 4th to the 11th century A.D. In the Sālankayana inscriptions (middle 4th cen. A.D.) *tu* takes the form as and , in the Mayidavolu plates of Sivaskandavarman *tū* is like (late 4th cen. A.D.); it is in the British Museum plates of Charu Devi; and in the Pallava-Chola (c. 8 to 11th cen. A.D.) *tu* takes the forms of , . The proto-type of the various form cited can be

24. The *Tamil Lexicon* gives the meaning of the word as that which is transverse, across or cross-wise; fetters, shackles, monacles, curve added to consonants etc.
Sudamani Nikandu: கைகால்களில் மாட்டப்படும் தளை
The word *vilanku* is derived from the word *vilakutal* meaning *neenkutal* (நீங்குதல்), *pinnidutal* (பின்னிடுதல்).

25. Nachinārkiniyār: "கி, கீ முதலியன மேல்விலங்கு பெற்றன
கு, கூ, முதலியன கீழ்விலங்கு பெற்றன... ."
Eluttu : 17.

traced to the form obtained in the inscription under report and thé device adopted therein may mark the initial stage in the process of development of vowelled consonant *tu* through the ages.

If the vowel *u* with a dot points to its short form as per Sutra 2, *Eluthu, Tolkāppiyam*, its converse, *u* without the dot, should stand for long *u* viz, *ū*, The latter is in perfect concord with the system obtained in the early Brahmi inscriptions of North India. Accordingly, the first two letters are to be read as *ū* and *r* constituting a Tamil word *ūr* which refers to a place or locality of human habitation and a term commonly suffixed to the name of a village or town such as Puliyūr, Tiruvoṟṟiyūr, Sānūr, Māmandūr etc. The next letter *tu* may be the initial letter of another word the rest of which are not available to us.

The single letter in the second line may either be *pa* or the upper half of *a* (𑀅). The letter appears to continue still further below but the sherd breaks off at its middle point. Most probably it is *a*, as similar angular type of *a* is met with in the potsherd inscriptions from Arikkamédu recovered previously.

The exact nature of the contents and purpose of the inscription cannot be ascertained out of this scanty material. Nevertheless, the letters occurring on the sherd as they are found incised before the vessel was fired in the kiln, should have been the work of the potter himself. The inscription under such a situation may hardly convey, be it even a complete one, anything other than the potter's trade mark, the name of the potter if an individual or of the guild which .brought out this class of vessel to the market, the name of the place of its manufacture and the like, analogous to the potter's mark "Arrezo" found on the Italian Arretine ware of 50 A.D. Has the Tamil word *ūr* of the inscription something to do with the name of the village or town wherein the vessel was manufactured imitating the patterns *in toto* of its foreign counterpart?

Palaeography and the Tolkāppiyam:

In many respects the character of the letters corresponds to those of the Arikkamédu potsherd inscriptions already

reported and to some of those Early Cave inscriptions of the Tamil Country.

The vowel *u* in the present inscription obtains two forms, one with a long vertical line and short base line analogous to the one found in the early inscriptions, and another type with a short vertical line but with a long base line slightly tending to incline downwards, perhaps intended to serve its purpose as a secondary letter covering up the full breadth of the consonant itself. The *pulli* on the top of the second type is an additional feature denoting the vowel's short form in agreement with the rule laid down in the *Tolkāppiyam.*

Letter *ra* with a straight vertical line is similar to those found in Arikkamédu and other inscriptions approximately of the same period. Its nature as a final consonant is indicated by a *plļui* which, again, reminds us of Sutras 15 and 104, *Eluttu, Tolkāppiyam.*

Letter *ta* does not assume the full form as that of 'h' of the English alphabet normally witnessed in the early Cave inscriptions. Its vertical line stops almost at the point where the side line branches off and it is skin to the form confronted in the Ikshvāku (3rd Cen. A.D.) and the Pallava (5th Cen. A.D.) inscriptions.

The letter on the second line, *pa* or *a* as the case may be, is fairly angular.

In more than one respect the present find is significant palaeographically. The notational sign known in Tamil as *pulli* appended to the two letters, one to the pure or final consonant *r* and another to the vowel *u*, elicits great interest. The fashion of marking a *pulli* as a notation to certain categories of Tamil letters is known to have prevailed from the days of the *Tolkāppiyam* which has pin-pointed numerous such instances.[26] This system of notation is conspicuous by its absence in the early Tamil Brahmi inscriptions but is found rarely from the 7th Century A.D. and this fact constituted one of the grounds for āssigning to the *Tolkāppiam* a

26. Please see Foot-note 16 *supra.*

late date, not later than the 5th Century A.D.[27]. On the other hand, the Satavahana Silver Coin of Vasisttiputra Satakarni, (2nd Century A.D,)[28] the Chengam lead Coin of 2nd Century A.D.[29] and the Araccalur inscription,[30] bear ample proof of the fact that the *puḷḷi* tradition with which the *Tolkappiyam* was fully acquainted was practised in the second century A.D. The present inscription on a well-dated pottery from Arikamédu, is yet another piece of evidence, pushing back the antiquity of the *puḷḷi* tradition and correspondingly of the *Tolkappiam,* to a date anterior to the Ist Century A.D. or to the last quarter of the Ist Century B.C.

Another distinguishing feature is that the *puḷḷi* is marked to denote not only the pure or final consonant as witnessed in the early inscriptions referred to above but also the vowel *u* to indicate its short form, truly echoeing the rules prescribed in the *Tolkāppiam.*

The unique feature of the inscription is that it makes an appreciable departure from the hitherto known inscriptions in respect of writing the vowelled consonant *tu* in an unusual manner. Instead of adding the normal *u* medial sign to the consonant *ta,* its very basic vowel symbol is marked, that too at the direct bottom of the consonant. Though this is the solitary instance, this mode seems to be the forerunner to the *tu* form noticed in the Tamil inscriptions of a later date.

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27. T. N. Subramaniam: *South Indian Temple Inscriptions* Vol. III Part II p. 1540-41.

28. D. C. Sircar: *Epigraphica Indica,* Vol. XXXV pt. VI 164 pp. 249-252.

29. *Damilika:* Vol. 2.

30. I. Mahadevan. *Corpus of Tamil Brahmi Inscriptions.*

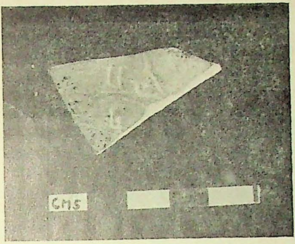

Fig. 1
Tamil Brahmi Inscription Exterior base

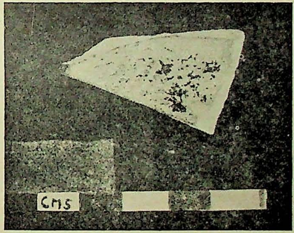

Fig. 2
The rouletted design on the interior base

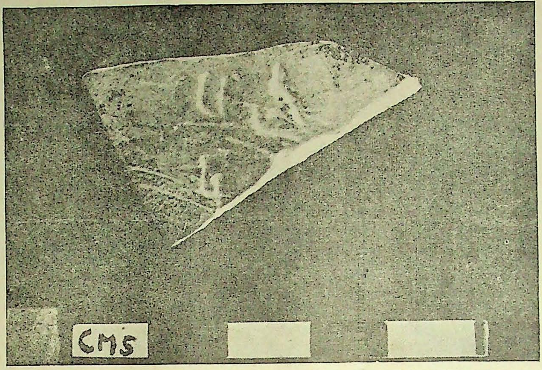

Fig. 3. An enlarged view of the Inscription

REPORT OF SEMINARS

The following is a report on the proceedings of a seminar on *"Orchestra with special reference to South Indian Music"* led by Thirumathi S. A. Durga, M.A., M.Litt., Research Fellow in the Department of Music, University of Madras on 8th August 1972 in Room No. 48 of the University Departmental Buildings.

Chairman (Director): K. K. Pillay, M.A., D Litt., D.Phil. (Oxon).

Leader: Thirumathi S. A. Durga, M.A., M.Litt.

Others:

1. Dr. Alamélu Govindarajan, B.A., Ph.D., Research Professor, Dept. of Music, Kalākshétra, Madras.
2. Thirumathi V. Bālambal, M.A., Research Scholar, Dept. of History, University of Madras, Madras-5.
3. Thirumathi Bāla Meera Chandra, Musician, 5, Damodar Street, Madras-86.
4. Dr. R. Champakalakshmi, M.A., Ph.D., Lecturer, Dept. of Ancient History and Archaeology, University of Madras, Madras-5.
5. Thiru P. Damodaran, Musician, 6, Alangātha Pillai Street, Madras-5,
6. Thiru Devaraj N. Bhat, Physician, 35, Nyniappa Naicken Street, Madras-3.
7. Thiru V. Gnānasikhāmani, M.A., Research Scholar, Dept. of Tamil, University of Madras, Madras-5.
8. Selvi K. V. Kalyāni, M.A., Lecturer in Queen Mary's College, Madras.

9. Dr. Miss I. Isaac, B.A., Ph.D., Lecturer, Dept. of Music, University of Madras, Madras-5.

10. Thiru George Thailayail, S.J., B.Sc., Loyola College Madras-34.

11. Dr. C. Kunjunni Rājah, M.A., Ph.D., Professor of Sanskrit, University of Madras, Madras-5.

12. Thiru V. Lakshminārayana, Ex-Professor of Music Jaffna College, 53, Lloyds Lane, Madras-14.

13. Thiru B. K. Misra, M.A., Director, Development Centre for Musical Instruments, 32, Millers Road, Kilpauk, Madras-10.

14. Thiru A. Nāgalingam, M.A., Research Scholar, Dept. of Tamil, University of Madras, Madras-5

15. Thirumathi S. Pārvathy, B.A., L.T., M.Litt., Professor of Music, Queen Mary's College, Madras 4.

16. Thiru V. Rāmasubramaniam, 95, Venkatarangam Pillai Street, Madras-5.

17. Thiru C. Rangasudha, Student, Diploma Course in Indian Music, University of Madras, Madras-5.

18. Thiru D. Sadāsivam, M.A., M.Litt., Lecturer in Indian History Dept., University of Madras, Madras-5.

19. Thiru Prof. P. Sāmbamoorthi, B.A., B.L., 59, Mundakanni Amman Koil Street, Madras-4.

20. Thiru T. Sankaran, B.A., Director, Tamil Isai Kalloori. Annamalai Hall, Madras-1.

21. Thiru P. Shanmugam, M.A., Research Fellow, Dept. of Ancient History and Archaeology, University of Madras, Madras-5.

22. Thiru Shanmugam, Dept. of Tirukkural Research, University of Madras, Madras–5.

23. Dr. S. Sīta, B.A., Ph.D., Lecturer, Dept. of Music, University of Madras, Madras-5.

24. Dr. L. Subramaniam, M.B.,B.S., L.L., 53, Lloyds Lane, Royapettah, Madras-14.

25. Thiru N. Sulaiman, B.Sc., Assistant Curator, Govt. Museum, Madras-8.

26. Thiru A. Sundaramūrti, M.A., Senior Research Fellow, Indian National Science Academy, New Delhi. M, 39-D, Cross Street, Beasant Nagar, Madras-90.

27. Thiru A. Swāmy, M.A., B L., Lecturer, Dept. of Ancient History of Archaelogy, University of Madras, Madras-5.

28. Thiru B. K. Viswanātha Śarma, Violin Assistant Dept. of Indian Music, University of Madras, Madras-5.

The *Chairman* welcoming the invitees to the seminar said:

I have pleasure in introducing to you Thirumathi S. A. Durga who is going to lead the seminar to-day. She is a research student in the Department of Music in the University of Madras. She has had good training in music under distinguished artists like Madurai Mani Iyer and Mahārājapuram Viswanatha Iyer. She is not only an artist herself but also a musicologist with research experience of 7 years. She has had training in Western Music too. With this equipment she has rightly chosen 'Orchestra with special reference to South Indian Music' as the subject of the seminar. We look forward to an interesting talk from her and I hope that there will be a good discussion on it. Now, it is my pleasant duty to request Thirumathi Durga to lead the seminar.

Thirumathi Durga: I thank the Director for the good words of introduction. I shall be glad to hear the views of the invitees

on the subject of my seminar after I have spoken and I shall then give my own reactions to those views.

The term orchestra is derived from the Greek word "Orcheis- thai" (oxeidal) which means dancing place. In the West, the term was used to describe the nuclear centre of the theatre, arena, where music and dance were performed. But, now an instrumental ensemble or the ground floor of the modern theatre is called an orchestra. In India, orchestra is known by the terms, *Kutapa, Palliyam, Sangītamāla, Vādyagōshti, Jantrā-Sammēlan* and *Jhankār* which mean a group recital of many instruments.

In India, sculptures, paintings, inscriptions and literature give ample evidence that concerts by a group of instrumentalists were known to Indians from very early times. In the carvings of Sanchi Barhut and Udayagiri which date back to 2nd century B.C., the earliet representation of orchestra have been seen. In these carvings lute, flute and drums are used in the orchestra. In a sculpture at Amarāvathi, eighteen women have been depicted as playing upon drums, sankhas and harps. But Ghana or autophonic variety of instruments are not found in these early representations. In the Vaikunta Perumāl temple at Kānchi, we find the orchestra consisting of players playing on Tāla instruments, drums big and small, and cymbals and another group playing on the rod like stringed instruments of that period.

In the paintings of Ajanta which belong to 2nd century A.D. we find the dancers provided with orchestral accompaniments. In cave No. I, the kinnaras are depicted as playing guitar and cymbals. In cave No. 19 on the left side of the central stupa, we find 2 groups of orchestra. One group consists of harp, cymbals, conch and drum and other group comprises of flute, cymbals and harp. A group of dancers, accompanied by an orchestra comprising of drums, flutes and cymbals are painted at the Bagh caves Nos. 4 and 5, which belong to 4th and 6th century.

These sculptures and paintings reveal that though orchestra is not alien to Indians and is known from the pre-Christian era, they were used only as accompaniments to dance performances. Recently, at Madhya Pradesh, a dramatic stage has been excavated at Sitabanga cave which belongs to 2nd century A.D. In that,

the representation of a seat for orchestra is found. Hence it is believed that orchestra was used also for dramatic performance from the early Christian era. Apart from these, orchestral music was used in processions from the very early times till to-date. In the stupas at Sanchi, we find the procession being depicted with instrumental group consisting of harps, drum flute, tambourines and trumpets or conches.

The inscriptions give evidence for the prevalence of orchestral music in South India. Mostly orchestras figure as accompaniment to the recital of religious hymns of sometimes as solo instrumental ensemble. The Vairameghavarman inscription at Kilpulam refer to a party of 5 persons to beat the gong and one to blow a trumpet thrice daily. (511, XII, 114). We find another description of Rājakésari varman granting a piece of land for the assembly for the singing of Tiruppadiyam hymns accompanied by *udukkai* and *talam* (129/14). A group of pipers serving in the temple is also evidenced in an inscription of Parānthakā I (C. 932) (126/25).

Literal evidences also bear eloquent testimony to the fact that music recital by a group of instruments is known to Indians from the pre-Christian era. The vedic singing was accompanied, by Lutes or Lute, Flute and *Mṛudanga.* During the *Mahavṛta* sacrifice, the *Dundubhi, Bhumidundubi, vīna, satatantrivīna* and *khanda veena* were played. In *Nārada siksha,* the term *'Rakta'* is used to denote one of the 10 properties of tone produced by a combination of flute and lūte.

'Vēnu, Veena Swaranamékobhave Bakthamithyuchyate". (IIIrd *Khanda*).

During puranic age, the orchestral music was used in sacrificial rituals. In *Bhāgavatham,* we find the reference thāt when the king Bali performed *visvajit yāga,* mrudanga, conches, ānakas and Dundubhis were sounded with cymbals, *Veena, muraja* and flute. In the Rajasūya Yāga by Yudhishtra, the instruments *mrudanga, sankha. panava, dundubhi, Ahakas* and *Gomukhis* were sāid to be played together. Almost in all the Sanskrit *kāvyas,* the reference for orchestral music īs found wherever music ānd dance performānce or a procession of

kings are described. Noteworthy amongst these *kavyas*, is the *Naishadam* of Sri Harsha wherein an orchestra comprising of harps, flutes, lyres, drums, cymbals and tabors is referred.

Among the Tamil literature, *Paripadal* gives reference to instrumental ensemble. Song-17.

ஒருதிறம், பாணர் யாழின் றீங்குரலெழ
ஒருதிறம், யாணர் வண்டின் இமி ரிசையெழ
ஒருதிறம், கண்ணார் குழலின் கரைபுஎழ
ஒருதிறம், பண்ணார் தும்பி பரந்திசையூத.

In சிலப்பதிகாரம் (Silappadikāram) the orchestral music is described in மங்கல வாழ்த்து பாடல் Mangalavālthupādal lines 45-46 in canto I.

"As they went forth into the streets, drums were beaten *Mrudangams* were sounded; Conches were blown."

In அரங்கேற்றுகாதை Arangetrukādai Canto III, Lines 135 it is described that

"At the close of the prayer, all the musical instruments held by the respective players were sounded" and in இந்திரவிழாவூரேடுத்தகாதை Canto V, lines 188 (Indiravilavureduttakādāi) we find the following statement:

"In another place' rose high immeasurable melodies produced by the flute, the drum, expert players on the *yal* and the human voice of the Pānar".

(V.R. Ramachandra Dikshitar, The Silappadikāram, 1939)

In ஜீவகசிந்தாமணி Stzs. 124 and 676 we find that Lute, flute and *mrudangam* were played together.

Manickkavachar in his *Tiruvachakam* says that இன்னிசை வீணையர், யாழினர் ஒருபால்-20-V.4. which shows that there were ā group of harpists and lute players to play on the instruments.

In திருமுருகாற்றுப்படை Lines 119-124 the orchestra consisting of trumpet, hombu, conch and drum is referred.

அந்தரப் பல்லியம் கறங்கத் திண் காழ்
வயிர் எழுந்து இசைப்ப வால்வளை நரல
உரம் தலைக்கொண்ட உரும் இடி முரசமொடு
பல்பொறி மஞ்ஞை வெல் கொடி அகல

In *திருத்தொண்டர் புராணம்* V. 33 we find the reference for orchestral music; consisting of conch, *Dundubhi*, *Tarai*, Trumpet and *Bheri*. "பல்லியநாதம் பொலிந்தெழ" and "பல்லியங்கள் முழங்கி". (சங்கம், துந்துபி, தாரை பேரி முதல்பொங்கு பல்லியநாதம்)

In music literature, Bharata in his *Natyasastra* first mentions the term, "Kutapa" to denote instrumental ensemble. The two types of orchestras, in proper form *Tata kutapas* (stringed group) and *avanadha kutapas* (percussion group) are first mentioned in Bharata's *Natyasastra* (Ch. XXVIII-3). He has said that kutapas are used exclusively in the dramatic performances (Ch. XXVIII-3) and according to the actor and actresses of the superior, middling and the ordinary type, the orchestra occupies different positions on the stage (Ch.XXVIII-6),

Bharata then gives the seating plan of musical instruments. The instrumentalists were seated in a circular way. He says that "The members of the orchestra (Kutapa) should be seated on the stage with their face to the East. The orchestra should be placed between the two doors of the tiring room mentioned before. One player of a *Muraja* (Mrudanga) should face the stage; to his right should sit the player of a *panava*; and to his left the player of a *Dardara*. Here the orchestra relates first to the players of covered instruments (āvanaddha) to his left will be the *vina* player and to his right, the two flute players...so much about seating the orchestra" (*Natyasastra*, English Translation by Manmohan Ghosh. 1961, p. 187)

From Bharata's description of orchestral setting, we find that drums are given more importance. He remarks that "in a festival, a royal procession, and a *mangala* ceremony in an auspicious and happy occasion, at the time of marriage and of birth of sons etc. in a battle where many fighters assemble and during such other acts, all the musical instruments (drums) should be played" (19-20 *Natyasastra*, English Trans-

lation by Manmohan Ghosh—1961, Ch. XXXVII, p. 163) He also says that a "a small number of instruments are to be played during ordinary (Lit. natural) household affairs. During expeditionary marches and performance of plays, all the instruments should be played" (*Natyasastra*, English Tranlation by Manmohan Ghosh–p. 163).

Sārangadéva also in his *Sangītaratnākara* says that drum is the principal musical instrument in an orchestra. *"Kutape Tvavanaddhasya mukhya Mardangikasatah."* Sāgaranandin in his *Nātakalakshanaratnakōsa* defines the orchestra as the Instrumental Music produced by *vādyas* (*vīna, vénu, Mrudangam and Kansya* (gong) (v. 2178).

In *Abhinavabhārati* by Abhinavagupta too, we find the reference to the seating plan for orchestra. He says that the drummer should face East, the *panāvika* will sit left and lute player to their left while two lute players will be seated right to them. (v. 17).

Therefore, even in musical literature it is found that orchestral music played the role of an accompaniment, either to drama or dance or figured in marches or processions and it did not rise to a concert level. Secondly, the orchestras are classified as stringed ensemble, flute band or percussion ensemble. Nowadays, an orchestra is a logical combination of stringed, wind and percussion instruments. Thirdly, in modern orchestra, there is no place for singers whereas in the music literature, the orchestra is said to consist of singers also. A kutapa is explained by Bharata as *"Sampetakagāyana vādakasamooha"* meaning, an orchestra is a group of vocal and instrumental players.

So the concept of orchestra has somewhat changed now from the early past. It has attained a concert status, with the advancement of instruments and playing techniques. Though we lack classical orchestral concerts as symphony orchestra of the West, we have temple orchestra, court band, dance orchestra and folk type of orchestra. Even today, one can hear the orchestral music in temples. They are called Thyāgarāya Vādyam consisting of Bhūri, Brahmatālam and

Conch, Hindusthani Takōra Vādhyam consisting of *Shenai, Damāram* or *Tappattai Bhuri, Brahmatalam* and *Davandai* and *Panchavādyam* which is of two kinds, the *Sevankha panchavādyam* and the *Kriyānka panchavādyam.* The former consists of Chennala, Timila, Sankha, Idakka and Kombu or Kuzhal, while the latter consists of Veeka Chennala, Timila, Chennala, Sankha and Kaimani. Panchamahāsabda is a group of instruments consisting of Tivava, Datta khandika, Jayaghanta and Kale and the Panchaturya of Buddhist religious music consists of Atata, Vitata, Atata-vitatā, Ghana and Susira vādyas. In the tooth temple at Kandy in Ceylon music of Avanaddha kutapa consisting of 24 drums can be heard. The Ashtādasa vādyam is performed in some of the Indian temples, This has been mentioned in *Vatulāgamam.* It consists of Bheri, Damaruka, Dhavala, Dindima, Dundubhi, Kahala, Maddala, Madduka, Mridanga, Nirpura, Panava, Pataha Sabda, Tala, Tumburu, Turya Venu and Veena. Herein, the majority belongs to percussion group while Kahala, Turya and Vénu are wind instruments while Tumburu and Vina are stringed instruments. At Tiruchur in Kerala, during the annual Pūram festival, about 20 to 30 Chenda players sitting on elephants play on the Chenda, while others blow, the *Kombu.* In some of the temples in Kerala "Panikottaka", a band consisting of Maram, Timila, Sankha, Chennala and Chenda can be heard.

Today, the Periyamélam which consists of Nāgaswaram, Ottu, Tavil and Tālam are used for temple rituals and marriage functions. This is called Tanjore band. In the Jain tèmples, the percussion group of instruments Aanandabhéri, Jampabhéri, Jayabhéri, Kalabhéri and Natanbhéri and Utsāhabhéri are plāyed together during the chūrnika recitation.

Naubat is the court band of Northern India consisting of Nine Instruments. It is also played on the gateways of Mosques. In South India, the Sangetta Melam comprising of the instruments, Flute, Titti, Kahala, Tālam and Conch are used in temples and in courts of kings. The Chinnamélam is provided for classical Bharatanātya of South India. It consists of Mrudangam, Cymbals, long-pipe or drone, Mukhavīna and flute or sometimes replaced by clarinet or violin. It is the dance orchestra.

Among the folk types of orchestra, Naiyāndi Mélam is a kind of orchestra consisting of one or two Nāgaswaram, Tavil, Pambai, and Tamukku and this orchestra is used for Karagam, Kāvadi āttam and Dummy horse shows of South India. The folk dance Oyilāttam, makes use of the combination of Mrudangam and cymbals. The Urumi Mélam and Singāram are also folk type of orchestras. Urumi Mélam consist of Nāgaswaram, Tavil, Dolak and cymbals. Sometimes a long flute namely Nedung-Kuzāl is also used. This orchestra is used for Bhoomādu by medicants. Singaram is also a rustic band and it is the speciality of the Adivasis of Tandikudi village in Madurai District. It consists of two small Nāgaswarams, two small drums and one cymbal. This band is also used for marriages and funerals.

It can be said that mere combination of many instruments to form an orchestra, is as old as the instruments themselves. Every religious and social function in South India is celebrated with orchestral music, the orchestral concert with a fixed group of performers to play on different instruments. The classical music of South India has been developed recently. But it needs a lot of development in future. In the medieval works on music, we find references for Vādyaprabhandās, Jantradandi and Patragītas and Mukhagītas which are compositions exclusively for instrumental playing. But they are not popular nowadays.

No doubt, in the West, the orchestra has become fully advanced and is of some musical complexity with its instrumental parade of variegated stringed, wind and percussion instruments capable of producing limitless, astounding combination of tone colour. The essential features of orchestra were standardised during the period of Mozart and Haydn. Then Bach and Handel experimented further and from the time of Bach, the compositions varied according to the choice of instruments. In India, the All India Radio first introduced the orchestral programmes under the caption of Vādyagoshti, Isaikōlam, Jantrasmmélan and Jhankār. First, in the external divisions of AIR, two orchestral units were established to function independently under Pandit Ravi Shankar for North Indian Music and

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Sri T. K. Jayarama Iyer for South Indian Music. Then in [illegible] the Delhi station of AIR amalgamated the two units. The National orchestra or AIR Vādyabrunda, is the first Indian orchestra which consisted of about 22 to 28 instruments according to the musical compositions. But, even today we do not have Carnatic-music oriented orchestral concerts in Sabhas or theatres. We also lack exclusive orchestral compositions such as symphony, concerto prelude and overone, of the West. Recently Prof. P. Sāmbamoorthy, late T.K. Jayarāma Iyer, Sri K.C. Thyagarājan, Dr. R. Vaidyanāthan and Emani Sankara Śāstri have composed a few exclusive compositions for Orchestra based on Carnatic music.

Producing orchestra for South India:

In the orchestra of South India, Violin, Veena, Gōttu. vādyam, flute, clarionets, Nāgaswaram, Mrudangam, Tavil Dōlak-Kanjīra, Ghatam and Mōrsing can be included. A smooth co-ordinated musical entity will result from a group of instruments only through the efficient seating plan of the instruments and players and by full utilisation of tone colour and timbre of the instrumental group. The success of the orchestra mainly relies upon the seating plan of the players in an orchestra. In South Indian orchestras, we can have first the Veenas and second Veenas, thus giving prominence to Veenas as our style of music is more suited to the style of Veena playing. The Gottuvādyam may take the place of the harp in the West. The old and new, the experienced and the inexperienced must be so mixed as to make the overall orchestral tone quality sound harmonious. The correct solution for this problem will be obtained only through trial and error. The conductor must assign particular pieces from the orchestral composition to the different groups or to an individual instrument at suitable intervals. First, the over-all tone quality and then the effect of each group of instruments must be studied by the conductor.

The different parts of a musical composition should be assigned to different group of choirs in an orchestra. This is called the "Scoring' for the orchestra. In other words, Scoring is the art and process of orchestration. The beauty of the

orchestra also relies upon the scoring ability of the conductor. The whole orchestra should perform like a single instrument and the complex instrument should be very carefully played by the conductor. Good ear for music, sound musicianship, a commanding personality, ability in the art of interpretation and the artistic imagination are the very essential qualities of a conductor. An orchestra with four or five players or even eight, may be performed without a conductor. But for a big orchestra, the conductor is very necessary as he has to decide the tempo of the piece for the orchestra, the part for each choir and solo instrument, and, also to bring out a harmonious blending of tone colour from the various instruments.

There āre certain other problems which have to be faced in producing South Indian orchestra. The first is whether harmonisation is possible with the South Indian rāga system. The answer is definitely no. South Indian orchestra should be always as melodic as the purity of rāga system has to be retained intact. It is erroneous to assume that orchestra is suited only for harmonic music. As there are two systems of music, harmonic and melodic, there can be two types of orchestras—harmonic and melodic. It is not at all necessary that we should build chords upon our notes in a rāga. The melodic orchestra will have a consolidated and pleasing rich tonal volume of the melody produced by the various melodic instruments. In the manner of jazz, we can introduce improvisation on melody instead of their improvised chord sequence. The rhythmic propulsion called "swing" can be achieved by our variegated percussion instruments. In the jazz, a theme is played at the beginning and at the end while the improvisation part takes the longest time. We can also have *'Niraval'* or improvisation on a particular theme in a musical composition. It can be performed by individual instrumentalists in solo part in an orchestra in the middle of an orchestral piece. Our percussion instruments can also play Jatis or rhythmic syllables individually for some time in an orchestral concert. As our compositions are mostly set in the medium tempo, the "swing" can be easily achieved.

The problem of tuning of the various instruments is another thing which has to be faced. Tempered scale is used by Westerners whereas, we have just intonation, as our music is based purely on melodic type of music. In orchestration also, we have to retain just intonation successfully as our orchestra too is going to be only of the melodic type, with our intricate *sruthi* values.

Many Indian scholars are of the opinion that we are trying to do what Westerners did five hundred years ago. But this is certainly not the case. We have a glorious hoary tradition of our melodic orchestra and in future we are going to make advancement only in the melodic orchestral setting whether in North Indian or South Indian Music, introducing new elements which will suit with our traditional Rāga system of Indian Music. Prof. P. Sāmbamoorthy one of the great musicologists of India has also remarked in his *South Indian Music, Book IV*, (p. 330) that "It is a mistake to think that the orchestra as an institution originated in Europe. Nor is it correct to think that orchestra means a group of performers which performs only harmonised music". The melodic orchestra of South Indian Music must be developed.

Lastly, lack of unity among our musicians and lack of advancement in our notation system are other reasons for the non-growth of orchestral concerts. Absolute team spirit and discipline are necessary for the players in an orchestra. The success lies on the concerted effort of the instrumentalists as a group and therefore no player can aim at personal fame. A lot of improvement on our notation system to write down the *gamakas* is also very necessary for the upbringing.

An orchestra is a logical combination of stringed, wind and percussion instruments. From the scenic point of view, the chordophones, aerophones, membranophones and autophones in an orchestra, in their correct arresting rows on "parade" are undoubtedly impressive. Coming to the aural point of view, the listener is struck by the infinite variety of tone colour produced by the various instruments. Each instrument has its own peculiar charm of emitting the tone colour and

when they are blended together in one harmonious whole, the orchestral music becomes the highest form of Musical expression. The kaleidoscopic combination of different instruments give their message conjointedly. The aristocrats of the orchestra, the strings, the torch bearers, which are the wind group of instruments and the noise making battery, arrest the audience by their beauty of colour, beauty of rhythm, beauty of texture, beauty of tone and also by the beauty of combination". On the artist's point of view Prof. P. Sāmbamoorthy remarks that "An orchestra is in a sense a democratic institution (*South Indian Music, Book III* p. 209). Herein even the third-rate performers are allowed to sit along and perform with first-class performers. Also it gives opportunity for many performers to take part in a concert. In the north, Ustad Allauddin Khan, has contributed a lot to orchestration being the leader of to Maihar band. Mr. Boral, Mr. Shirali and Mr. Timar Baran have also made invaluable contributions for the orchestration of Hindusthāni Music. No doubt, orchestra deals with heavy music and gives room for most subtle nuances of expression. As the orchestral music is highly evolved and complicated, it requires the highly complicated instrument—the orchestra. In South India advancement in this field is very necessary, to produce operas in South India besides the concert value of South Indian orchestras.

P. Sambamurthy:—Orchestras or Vādya brindas have existed from ancient times. There is the reference to *Vīnā Ganagin* in the *Vedas*. The word 'Palliyam' in Tamil literature denoted an orchestra. Sanskrit works on music call orchestras as Kutapas. Performers of Kutapas stood in a circle and performed. Sometimes the performers stood in two rows, facing each other and performed. This is borne out by Mānicka Vachagar's statement "வீணையர் ஒருபால்; யாழினர் ஒருபால்", in his Tiruppalliyezuchchi—திருப்பள்ளியெழுச்சி i.e., Vainikas on one side and harpists on the other side. There was the Tata kutapa or stringed band and Avanadha kutapa or a band of drums. The Vamsaka brinda represented a group of performers on wind instruments. Kutapas are depicted in sculptures and they merely consisted of a group of players on musical instruments. The Kutāpas sometimes performed solo, but mostly they provided accompaniments to performances of dance-dramas.

With the development of the rāga system and with the emergence of musical compositions set to a specific time-measure, the *Sangīta méla*, capable of performing orchestral music of a melodic type, emerged. This melodic orchestra came into existence during the 16th century. Shahji Mahārajā in his '*Pallaki Séva Prabandham*'', refers to the Sangīta méla. In this group, there is evidence of tonal strength along with the tone-colours of different instruments, being represented in the proper proportion. Indian music is essentially melodic and naturally Indian orchestral music also played melodic music. Instrumental forms or Vādya Prabhandas like Mukha gītas or overtures and Naḍai gītas or marches were performed by the Sangīta mélas in their full strength. The Sangīta méla in Thanjavur, continued till the time of Serfoji and afterwards got disbanded with the disappearance of Thanjavur as a separate State. Even now there are families in Thanjavur, which claim that their ancestors performed in the Sangīta méla.

Future of South Indian Orchestra

The violin and clarinet have come to stay in South Indian Music. With a proportionate addition of these instruments, a new and rich Sangīta méla can be developed. Instruments like the Sārangi and Dilrūba with a mellow tone can find a place in this orchestra. This new orchestra enhanced by tonal richness and representing different types of tone colours can give performances of both classical music and popular music. An orchestra is always one of the important emblems of a State. Such orchestras can perform in temples on festive occasions. They can also give programmes in Sangīta sabhās and thus a new career may be found for performers on instruments. Special compositions may be written for being performed by such orchestras. Classical compositions can also be performed by them. They may be requisitioned to perform accompaniments to operas and dance-dramas. Pātra vādyas, Pātra gītas and Pātra jatis may get added significance from them. On account of the massiveness of tone, performances by melodic orchestras will have a great appeal. This is one of the lines along which future music may develop without in anyway sacrificing the subtleties of tone and grace, which are the back-bone of the rāgās of Indian music.

Thirumathi Alamēlu Gōvindarajan—It will be difficult to place the exact date of orchestration in the history of music, since musical instruments have been in use from the earliest dawn of civilization. The Sumerian and Assyrian sarcophagus-sculpture slabs have revealed a few musical instruments. It is in the nature of musical instruments to reproduce what the human voice sings or the human mind and intellect want to compose and express. So even the earliest man used his own variety of musical instruments for his emotional expression, however crude or primitive it may have been. The question is whether these musical instruments were just part of his religious equipment and confined to rituals or whether they were part of his social life too. We need an insight into musical history to draw our conclusions.

Authentic sources to help us to determine the evolution of music are available to us only from the Greek era. Thanks to great men like Pythagoras and Aristoxenus, scientific and theoretical principles were evolved in music as early as the 4th century B.C. That period revealed a leap forward in cultural development in general and in music as well. More scales, or modes, as they were then called, came into vogue in the arena and to play them, more instruments, especially of the strings suitable to the many scales, were introduced. The Greeks fancied playing the instruments together and their aesthetic sense prompted them when needed to produce a pleasing melody. Besides, they did not confine this grouped instrumental music to religious rituals but gave it prominence in their secular entertainments also. However, they seem to have preserved a certain conservatism throughout. *Orchesis* meant the art of dancing or rhythmical movement of the body and *Orchestic* referred to anything related to the dance. Hence it is surmised that orchestration must have meant instrumentation of music which accompanied dancing. The Romans were a little more adventurous in their experiments. They introduced more percussive instruments... wood and brass ..into the orchestral group, and even included a few of the mid-orient instruments which had come into use in Europe.

In course of time, a few centuries thereafter, the orchestra also became an accompaniment to vocal music which was more of a plain, simple melody—a plain song—and the Church Choir also enjoyed a background of orchestral music. The Church, at this stage, felt that 'Orchestration' was more for the layman and that it was interfering with the sacredness of worship; it abandoned it outright. Orchestration suffered a setback but it was revived and gradually raised to its present glory from the skeleton that had remained as the preserve of minstrels and troubadors. Today 'Orchestra' occupies a pride of place in Western music with a large variety of instruments, varying in structure and tone, with a script or "written-music", for the different groups of instruments to follow. This is necessary because Western music harmonises plural melodies, played simultaneously but producing a wholesome and appealing musical sound. This sample-survey of the Western Orchestra is necessary because although a galaxy of musical instruments have existed in India from time immemorial, the 'Orchestra' as a structure of musical genius and intellect was developed by Western musicians and has been a part of Western music for some centuries now.

In Indian music also we may say the orchestra was in evidence long ago if we take it just to mean sounding many musical instruments together. The Vedic literature which constitutes our earliest literary source, gives us an encyclopaedic view of some of the instruments that were used in particular rites and rituals. The nature of the instrument to be used is described—string, wind or percussion—its character, viz. soft, loud, moving or awe-inspiring; whether played by man or woman; whether played solo or in groups; if played in groups, the other instruments that went with it; whether it was itself a leading instrument or if it merely followed another. We get a fund of information from the Rig Vedic hymns, Satapāta Brāhmaṇās, the Upanishads and other texts. "*Vishṇudharmothra Purāṇam*", besides mentioning the musical instruments, also reveals the character of each and its place in the orchestral set-up. e.g. *Dhardhuram* for fear and *Gōmukam* for sriṇgāram and hāsyam. *Marijanikam* and *Murajam* were to be placed to the rear of the singer; *Paṇavam* on the left, *Gairikam* on the right; *Vamsavada*—a pair of flutes were placed on the left, and so on. Some instruments were to be played on the

eastern side of the Yāga. As soon as the *dundhubi* was sounded, all the instruments excepting the *alabi* were to start playing. A couple of viṇas—the *Mahāvīṇa* and *Silavīna,* were played inside the Yāga premises while *Kandavi* and *Pichori* were played outside. There is also an indication what instruments must be played by the wives of the Udgātri (chanters) and where they should be seated. All this goes to prove that our ancestors did have a taste for orchestral music, could appreciate finer points, and even with limited resources could extract the maximum output. We must remember that this "Vedic Orchestra", which has been the earliest in India, perhaps, though popular, has served only as an accompaniment to Vedic chanting. Naturally the emphasis must have been more on rhythm. With the limited range of the musical scale it was easier to follow the main stream of music. The three varieties of musical instruments, strings, wind and percussion, were in plenty and combinations and groupings of instruments suitable to specific hymns and functions were discovered. It was based on this principle, we may assume, that the classification of orchestral music, as temple-orchestra, dance-orchestra, prayer-orchestra, piper-orchestra, etc. came into existence.

The sculptured panels of Nāgārjunakoṇda and Amarāvatī display a large variety of musical instruments, some of them in orchestral groups. So do the paintings of Ajānta and the sculptures of Ellōra. Ancient classics of Tamil literature carry a lot of references to prove the presence of the orchestra in their cultural heritage. Orchestral music for dance, for instance, is described as follows:—the Yāzh (harp) followed the flute; the softer drum followed the harp; the louder drum followed the softer drum and all the instruments together produced the music of the orchestra.

How was it, then, that India which stores a treasure of musical instruments, did not develop the 'Orchestra' as a separate musical entity?

The reasons are quite a few. In the history of Indian music, the recognition and use of quartertones within an octave have played a vital role, especially in the development of the musical scales. This more or less fixed the nature of Indian music to run on a solo-melodic line. Numerous scales

were derived, using a permutation and combination of all the available notes in the octave-range. Strict rules for the fixing of notes pertaining to rāgas were formulated and adhered to. But in this regimentation a certain elasticity was also allowed. Slight sharpening or flattening of notes without any over-indulgence, of course, to achieve an aesthetic appeal was permissible. Hence the values of Indian melody depended a lot on ear-perception and could not be completely confined to fixed notes. This characteristic feature of Indian music gave full opportunities to individual musicians to use their creative ability in dealing with a rāga or handling a composition. The presentation of 'the rāga' as an improvised musical form is peculiar to Indian music and may be taken as its contribution to world music. The musician could display his imagination and skill; these qualities varied from musician to musician and it is rather difficult to write down in precise script-notation such a musician's music. Though each rāga bore its own stamp of individuality, and its characteristic gamakas, or grace notes, each musician could handle it in his own method.

Such a highly evolved and technically developed music was felt to be more suitable for individuals than for group-music. But never has Indian music abandoned instrumental accompaniment. Even today no vocal concert is performed on the stage without suitable accompaniments on the instruments. The rhythmic element...or timing in music...is maintained by percussive support. And the string or wind accompanist plays all along in a manner adjusting to the main vocalist, but has ample scope to strike his own individuality. The musicians get into a competitive spirit and the greater the musicians the greater is the competition and the rich flow of music to satisfy the audience. To the solo instrumentalist, of course, the field is all to himself.

Once the strands were loosened and music was allowed to develop on one's own imagination and creative ability, it was felt unconventional to submit to the type of musical drilling that the orchestra demands; musicians had learnt to pack their music with a lot of emotional appeal and they feared that any regimentation would interfere with their zeal. We couldn't blame them for this. One of the influences of the

Western impact on us was the creation of the "band"...a group of musical instruments played together at functions...in which the majority of the instruments belonged to the wind-group with wood and brass instruments of percussion giving proper rhythmic emphasis to set off their vibrant tone. These band-groups were popular and could play even compositions of great composers like Tyāgarāja. Of course, they chose and practised pieces that did not demand subtle and intricate uses of gamakas. In short, their music was simple and disciplined. Popular they were on many happy occasions but even so, they did not find a place in the concert-hall programmes.

One more reason for the setback in the growth of the orchestra was the financial assistance it needed to maintain itself. Unless the rich and affluent or the State could undertake to give it their patronage and encouragement, it could not be expected to survive. We must be proud and happy that the All India Radio have organised very good orchestras at the Centre and in the States. The musicians comprising the orchestra are all of uniform standing and merit and with experts directing and supervising them, it is a pleasure to listen to some of their programmes. Earlier I mentioned the band could play only simple tunes without gamakas. The players had probably no technical knowledge of music and their instruments were unsuitable to gamaka manipulations. But it is different with a group of real musicians and musicologists. They could combine and play most intricate tunes without disturbing the emotional appeal of the composition or the image of the rāga. A pause here and there, short, solo sallies in between, only strengthen the appeal of the music. The AIR Orchestra do not play for long durations except in specific programmes.

It will give an impetus to its revival, if musicians of renown, both North and South, will interest themselves in the growth of the Indian orchestra. They can constitute a Board of advisers to explore the possibilities of taking the orchestra to the concert-hall for programmes for such length of time as are allotted to other music concerts. We have the good fortune to have expert instrumental musicians with us and we need their advice. A few mini-orchestras such as the Vīna, Vēnu, Violin and Mridangam combinations are becoming well known but we want more.

Attempts must be made to increase their strength in variety and number. The experts may point to the difficulties confronting the formation of an orchestra, large in size and advanced in its music. But they may be requested to explore possibilities of surmounting them. Orchestra of this advanced category can be composed only of well-qualified, skilful players to whom it will mean more than a mere pastime. I may also mention here that the film-orchestra caters to many tastes and some of them are impressive and popular.

The other suggestion I would like to make is to introduce the system of maintaining orchestras in our educational institutions, at least in those that offer courses in Music. Professor Sāmbamoorthi, our musicologist, has already emphasised its importance and has done a lot towards implementing it. He has himself organised and conducted an orchestra but I am afraid the interest shown by the participants was only momentary—not because of anyone's unwillingness or lack of interest but because there was not enough encouragement to help it to grow. It is no easy task to build up an orchestra. To cart the instruments from place to place, to keep them in good tuning, to keep the players in good form by frequent rehearsals, to teach new pieces to relieve monotony both to the players and the listeners...for all this we must have physical energy and ready money.

Popular musical institutions or associations as the Music Academy of Madras, Tamil Isai Kalloori, Kalākshétra, Central College of Music, and a few others from Bombay, Delhi, Bangalore, Hyderabad, and other Centres where they have schools of music—if these can help to build up the Indian orchestra, it will definitely mean one more stride, though novel it may seem to some, in the progress of instrumental music.

A parallel research may undertake the study of all types of musical instruments that have been in India from the earliest times. The Sangīta Nāṭaka Akademi may be approached for financial assistance by those who desire to form an orchestra.

'Art for art's sake' is a good slogan, no doubt, but art needs a substantial monetary basis to stand firm and grow to its full heights.

Thiru Sankaran:—Literary references from the *Natya Sastra* & *Silapadikaram* about the existence of the Orchestra in some form or other are ample. It is understood from the accounts of scholars that Bharata lived anterior to 500 B.C.; the terms *Kutapa Gana* is a relic of this hoary past indicating in one way the concept of the Modern Orchestra. The *Silapadikaram* (2nd century A.D.) seems to indicate a parallel concept in Tamil tradition as seen from the expression *'Pallyam Isaittal'*ı (பல்லியம் இசைத்தல்) [*'Pallı* manyı*Iyam*: Musical Instrument] Decendants of artists employed by Serfojee (1798–1833) the musician-prince of Thanjavur as participants in Orchestras provide a little more evidence. Terms in current usage as *'Periya Mélam'* & *'Chinna Mélam'* respectively for Nāgaswaram and Dance Bands is one more indication. It would be intersting to find out who the distinguished conductors of the Orchestras were either in the early days or during later ages. It should be equally interesting to study the type of compositions played by such orchestras. A more extensive study and reference to scholars would help us to understand the type and number of the instruments and the order and arrangements of playing them together in parts or in combinations. It is worth probing why the melodic orchestras did not evolve further anticipating tendencies and without waiting for All India Radio to develop it. It is however an established fact that the orchestras of the melodic type are a *fait accompli* whatever the evidence or tendency in earlier ages.

The earliest orchestra known to me from advertisements was Prof. Gabriel's Orchestra. I am not sure if it was Karnātic in approach. Audio-visual familiarity with the typical Karnatic-Orchestra was vouched to me by the Prof. Sāmbamoorthy. From the early thirties my profession as Broadcaster bred greater familiarity with the orchestra known in Regional Centres as *Jantra Sammélanam*, Vādya Gōshti, Vādya Brinda and a host of other names. That was also the period when Music with Orchestras dominated the films. Several of the South Indian vidwāns turned film stars the earliest of them being Mahārājapuram Viswanātha Iyer and K. B. Sundarāmbal in Asandās' *Nandanar*. It may not be necessary here to catalogue the films or the stars except to indicate that the Karnātic Music coloured every branch of film or drama and dance. The stage also used to be dominated by the Music of Kittappa, Subbiah

Bhagavathar, Devudu Iyer, Kasi Iyer & others. Later came the National orchestra of the All India Radio the conductors being Pandit Ravi Sankar, T. K. Jayarama Iyer and some times Sankara Sastry.

Sāmbamoorthy's orchestra consisted of a few Veenas, Violins Flute, Mridangam and few other instruments too. The players were either the members of his Summer School as teachers or pupils under unified command with a common 'Patatantram' of Carnatic songs learnt by rote and played without a script from memory. I remember the orchestra found a platform at social functions in schools and colleges and admission was free. Prof. Sāmbamoorthy has composed a few songs specially for orchestra. He is the competent authority to explain all about his pioneering venture.

From 1938 the Radio Carnatic orchestra became a daily affair. Compositions for the National Orchestra, Delhi were composed but the Regional Orchestras played traditional songs keeping clear of complications of copyright. All these songs were voice oriented. (It may be interesting to observe here that the Raga Ālāpana and Thayams published in the Tanjore Saraswathi Mahal series indicate two types.(1) Gatradandi காத்ரதண்டி suitable for vocal music and (2) Jantradandi ஜந்த்ரதண்டி for being played on veena. And if my information is correct the Mallary is special composition exclusively for Nāgaswaram with emphasis on rhythm and absence of Sāhityam)

The combined onslaught by an army of instruments called for script. The duration varied from five to sixty minutes at the most. The orchestra here is the *principal* trying to sound like a single instrument. The orchestra would lose its status when a voice took on itself the role of the principal performer in line with Indian tradition and relegated the orchestra to the role of an accompaniment playing together with the voice or, alternatively either in part in full. The films encouraged this type but played 'a background' on the lines of set Chittswaram or Korvai, the voice remaining silent at that time and joining with the Eduppu of the Sāhityam. There are also instances of programes entitled 'Violin with Orchestra' 'Nāgaswaram with orchestra' All India Radio evolved a standard pitch for giving its

orchestras an individuality, and distinguishing mark. The *number* of instruments in such orchestras is not specific. It depends on the availability of instruments, players, finance, elbow room, etc. *Patronage* is confined to broadcasting, cine studios, princely and temple establishments being out of the question.

As I understand it, in Indian music in general and Carnatic in particular the tradition is Orchestra—oriented. This is true of vocal and Instrumental concerts, *Kathas*, dance recitals, dance dramas (operas) and dramas. The minimum number of instruments for orchestra support to voice or instrument like violin, flute, or Nāgaswaram is a Tampura, Tutti or Ottu; it is thus a one man orchestra, the minimum being irreducible and in case of Veena & Gottu the side strings provide the tonic orchestra. The function here is provision of *sruti* by the melodic orchestra sounding continously through the concert. Unless there is provision for keeping time with hand beats or cymbals, a percussion accompaniment has to be provided, here. The function of the orchestra is marking rhythm. Addition of veena, violin, flute, clarionet or harmonium is for accompaniment. The flooring or the minimum number for *sruti*, tālam, instruments is more or less definite, but the ceiling is indefinite the more the number of instruments, the merrier of course but it is conditioned by finance, capacity, space and extraneous considerations, not necessarily aesthetic The maximum number of instruments in vocal music concert by Kancheepuram Naina Pillai used to be eight and labelled the Nāvag rahas on the dais or "full bench", vocal, Violin. Mridangam, Kan jeera, Ghatam, Dolak, Gettu, Moresing and Konnakkōl. Mikes were unknown in those days when Pillai died in 1934 and only his stentorian voice and mastery of rhythm held the reins in order. Never did instruments sound together; they played in turns or in pairs except when percussion played *mohras* at the finale. Here two observations need to be recorded. Whatever the degree of the relevance. I remember the Music Academy passed a resolution recommending the limitation of instrumental accompaniments. It is however seen that concerts by female musicians nowdays favour "the Full bench". It may be interesting at this stage to draw attention to the stanza about the invocation for Mādhavi's dance in Śilappadikāram and also to the order in which the instruments articulated. The instrumentalists described as Kuyuluva Maakkal குயிலுவமாக்கள் *stood*

in order on the stage. Dancer Mādhavi stepped on the stage with right foot forward and reached the pillar on the right side of the stage. The artists attached to the orchestra were on the left and started the programme with two invocatory songs vocally. The instruments joined on the conclusion of the vocal invocation, the flute coming first and the *Yazh* யாழ் shadowing the flute and Mridangam shadowing the *yazh*. Then in order came the Muzhavu முழவு then the *Kudamuzha* குடமுழா then the *Edakkai* இடக்கை.

Indian genius in music extols the voice and relegates instruments to a secondary role. Compositions are valued for their *Sahityams* and vocal articulation. The best instrumentalist is one who sounds like the voice. For lending the continuity of resonance exotic instruments like Violin and clarionet have been Indianised to support the voice and purists, the watch dogs of *sampradayam* have not been slow to voice their protest and indignation at the equal temperament of the clarionet and harmonium as instruments, for accompaniment in Carnatic tradition and atleast in this context we have to analyse the need for cultivating a melodic orchestra that would become the principal in a modern concert eschewing the vested interest of the voice.

The melodic orchestra of today has been thrust on anunwilling throat by force of circumstances.

We shall first consider the aims for fostering a melodic orchestra today.

(a) It is to provide variety. Quantitatively music has progressed by giant strides. Even in the city of Madras the total strength of Sabhas may be over fifty. The membership of each is sizeble Local centres avoid problems of distance and conveyance and on an average there is at least one performance a month besides festivals and anniversary series. The Radio gives a round-the clock service. And classical music apart from Solo vocal instrumental recitals has to provide variety for categories of listeners, as music lessons. magazine programmes, and Quiz. *Vadya Goshti* is a distinct variety the number of instruments varying from two or more. It provides variety in another respect. Compositions not usually heard in concerts, new compositions, Rāgamālikas, dance-music widen the repertoire of the orchestra and also broadcasts. Thus beyond doubt orchestras are worth listening to in broadcasts.

(b) It is hoped that orchestras would provide for revival of instruments and employment of instrumentalists. Growth of orchestras would naturally open avenues of employment to instrumentalists of various types, and though mass production of musicians in schools and colleges and universities has become possible after the decent burial of the *Gurukula* system opportunities for training are not available in equal measure. The wealth of instruments is enormous but not all instruments that figure in orchestras get coaching facilities. This would depend upon action and reaction, facilities growing up with demand. Instruments like *'Swarabat'* *'Gettu'* are neither available in market for sale nor do they find a place in institutions for subsidiary study. The question of providing facilites for scientific training of players for orchestra or conductors would likewise need consideration.

(c) The orchestra neccssarily implies a crowd—even two is a crowd and the entertainment is by a crowd for a crowd and volume of sound produced is bound to be less intimate even without amplification and befitting an open air rather than a chamber concert. Joint effort is bound to preclude graces and several nuances that are the cream and pride of Carnatic music. New compositions by modern composers need to be studied and are best explained by composers themselves regarding details of the compositions their peculiar features, and apportionment of parts taking into consideration the construction of the instruments, their pitch, range etc.

It cannot be said the top class instrumentalists have at any time figured in orchestra. Could we consider this a built-in concession to mediocrity? This would be difficult to condone when Carnatic music has already reached a peak and not toddling with a feeding bottle.

Difficulties in the way are :—

1. Prejudice of hide-bound tradition against experimentation is formidable. But all the same the orchestra has come into existence.

2. An organisation with finance, studio facilities and rich enough to employ categories of instrumentalists and capable of

educating them incidentally in the modern techniques is a chief requisite.

3. A competent conductor with acknowledged musicianship, capable of inspiring respect for leadership and, disciplining the participants for team work, forgetting for the nonce their individual traditions and *gharanas* is important. He should cultivate the habit of punctuality, regularity and belief in adequate rehearsals. Conventional accompanists vie with principal musicians and other fellow accompanists to out-do others. Rehearsals are unknown except in the case of say, the drummer in a dance recital who has to co-ordinate the cymbals and the dancing feet. In an orchestra it is team work and not competition. The conductor will have to choose items, rhyme them and apportion parts, keep time, control pace and movement. He should collect new songs for a widening repertoire, catalogue, index the items according to categories.

4. The music has to be scripted. Usually only the *swaram* is scripted leaving out the *sahityam*. Several copies have to be made and not infrequently in several languages. This is a major hurdle. It is a new experience to musicians presuming that they are good at least in the three Rs In one sense it is a unifying influence capable of compromising *paratantrams*, *gharanas* even if it offends the *Sahityam*, and slant of tradition. Education in reading staff-notation has been tried with varying degrees of success. It is bound to encourage an alien (musical) language at the cost of our national and regional systems. In the interests of progress, a little broadmindedness, has to be cultivated because foreigners are learning our music. Teaching aliens is becoming a lucrative job and teaching them in their language and technique would necessitate our mastering the techniques first.

5. Orchestras take true to tune and settle down. Adequate silence and discipline is absolutely necessary. Policy makers in All India Radio once suggested that Indian music should first be emancipated from hide-bound prejudices. Good. In the same breath it was emphasised that the orchestra is one device for entertaining a gathering and enjoying music amidst polite conversation. Polite conversation however soft cannot be tolerated,

either during a performance or during the tuning stage, The orchestra if wedded to such an ideal is bound to dig its own grave because by nature the orchestra makes less intimate sounds and may breed noisy conversation. Facilities for timing are non-existent even in the most modern orchestra and is by no means possible at a social or religious gathering. Parallel loud speakers blasting high class music vie with instructions to motor-drivers to taxi to the portico for the waiting V. I. P.

It is possible to build up difficulties against every ready-made solution. The orchestra is a *fait accompli.* How best are we to utilise it and make the best of it is the problem. A constructive approach is inescapable at this stage. We have to mend it, if need be; there is no need or possibility of ending it. Shall we say "Grin and bear it?"

To me it looks as if it has to be content with the cloistered existence in a studio. Schools, colleges and universities and ladies' clubs can build up and foster orchestras keeping the dignity of Carnatic music in mind.

What is the *modus operandi*? Playing of all instruments from A to Z? Playing in parts? Alternating with voice? Providing just a background like a *chitta swara*?

Orchestras are now being considered as hand-maids to dance dramas–operas. Even *Kuchipudi* and *Mēlattur* "operas" have stepped out of their holy precincts and faced the mikes and footlights and are now dispensing with the "*asal stree*" part and encouraging ladies to participate in them. If they desire to be emancipated from the *Veedhi Natakam* (street plays) status and promoted to sophisticated auditoria, the orchestra and the voices need a thorough overhauling. The snags and situations in these dance dramas wedded to the time theory and the *raga rasa* theory could exploit appropriate instruments in groups or pairs or solo. Latterly there has been a tendency to make the best of neighbouring traditions as *Sadir*, *Kathakali*, and utilise the *Chanda suddhi Maddalam*, *Tabla* and various exotic instruments too Some times they distract attention and the instruments do what the dancing feet have to execute. We have to guard against over-doing and it should be possible to honour our *sampradāyam* too.

Thiru L. Subramaniam:- Before dealing with the problems of orchestration with reference to South Indian Music, I would like to lay bare the Western concept of an orchestra.

Orchestra is the general name for an ensemble of instruments and players of different kinds under the direction of a leader—the Conductor. Its main features are as follows :—

1. The variety of its constituents
2. Some parts including more than one player
3. The composition being essentially based on harmony and
4. Finally the covering of a range of about five octaves.

Even the earlier composer Monteverdi, an Italian, who lived from 1567 to 1643, used in his opera—Orpheus, almost all the instruments available at that time like violin, viola, large flutes, thrombones, trumpets, harp and harpsichord. Since the time of Bach the string section forms the backbone of an orchestra. Wood winds and brass sections were used in addition to provide a variety of colours. Orchestra has been used primarily, as such, or secondarily as an accompaniment to soloists. In a purely orchestral composition, there are more instruments in action together. When Bach used the orchestra as an accompaniment, he made use of strings, oboes, trumpets and figured bass, or he chose strings, oboes and figured bass, or strings, trumpets and figured bass. A solo (voice or an intrument) was accompanied by strings and figured bass, or by figured bass alone, or by flutes and figured bass, the aim was to portray the expression of colours of the various movements. Thus in all these compositions the figured bass was the additional medium used to express harmony and we see therefore that the orchestral composition has always been based on harmony. The origin of harmony can be traced back to the 9th or 10th century, when even the concept of orchestra had not taken its shape.

Our system of music has been maintained, probably, in the same traditional manner without any change from a very early period. Owing to the absence of harmony and the unfamiliar melodic progression- and due to employment of *gamakas* involving micro tones, orchestration in South Indian music is rather difficult.

A common note which occurs in different ragas may be interpreted in different ways. eg. the nishadam in Begada and Todi. Moreover, in our South Indian system the vocalist or instrumentalist improvises in a concert for a considerable period of time. When we try to orchestrate we may have to cut down our improvisation to a great extent. And improvisation being a chief feature of our music, we would not provide the full satisfaction to an orthodox audience.

The name 'Orchestra' is a Greek word and denoted the level space of the ancient theatre where dancing and evolution of chorus took place. This space was also the location of whatever instruments that were in use then, and in time, assemblage of these instruments took on the same name. So the orchestra is essentially a foreign term. We have never, at any time, in India had such orchestra. The instrumental ensemble used in the Bharatha period called 'kutapa' was the purpose of an accompaniment to dances etc. They were of three types (1) string ensemble, (2) wind ensemble and (3) percussion ensemble. If we proceed to refer to these '*kutapas*' as orchestras, we would imply that there were three types of orchestras—string orchestra, wind orchestra and percussion orchestra. This would just not correspond with the orchestra of western concept, because the innate features of the orchestra are lacking. Then again, at Tyagaraja festivals held at Thiruvaiyār, we witness a number of vocalists singing the *Pancharatna kritis* to the accompaniment of about twenty to thirty violinists and ten to twenty percussion instruments. This should be an orchestra according to our comprehension of the term and it doubtless, sounds absurd. We would do well therefore to consider this word of purely western terminology.

But we may still harbour the notion that it is possible to form a melodic orchestra in the South Indian field of music, since there are two systems—the melodic and the harmonic. According to the western system, however, the harmonic and melodic music cannot be two separate entities. Harmony and melody are interwoven and they always go together. In a composition based on harmonic progression, for example, the four parts have different notes and yet when sung or played together, they sound the harmonic progression, and each part in addition to the principal melody when considered alone forms a melody

with a varying melodic curve. Similarly in a melodic or contrapuntal composition, each part is a separate melody independent in itself in its motion and when these different melodies are sung together the implied harmony is brought to light. When more than one note is played together it may form a concord or discord but results in the formation of a chord and this constitues harmony. The formation of a melodic orchestre in the South Indian Music poses a difficulty, due to our complex *gamaka* system which involves the microtones. The problem of notation for these microtones, eventually. arises.

In the modern Western orchestra, there are four divisions or sections:

1. Strings :- consisting of first violins, second violins, viols, violin cello and double bass.

2. Wood winds :- flutes, oboes, clarinet and bassoon

3. Brass winds :- Horns, trumpets, thrombones and tuba

4. Percussions - Tympani, and drums of different types with triangles.

Percussion by themselves are rarely used for more than a few minutes. For many special effects, harp is frequently included as in Nutcracker's Suite, - a composition of Tchaikovsky. The Symphony Orchestra of first class may have as many as hundred players or above. The leading first violinist in the large orchestra is the concert-master and the leading second violinist is the second or assistant concert master. Music for each instrument is written separately in orchestral parts and the full score used by the conductor is an orchestral score having the individual parts combined in a unified system of staffs. The whole orchestra enjoys support mainly from the violin section, because it is the violin-the queen of all the instruments that plays the major role. The violin is as good as the human voice in mellowness and emotional expressiveness. In fact, it has got a wider range than the human voice, Moreover chords can be played on the violin which would be impossible in voice. Although the piano has still wider range (7 full octaves) it lacks in emotional expressiveness and, vibrato, harmonics and

microtones (intervals less than semitones) etc. cannot be played as opposed to the violin. When a particular note is held, its intensity could be gradually increased (crescendo) or gradually decreased (decrescendo) only in instruments like the violin and this would be quite imp ossible on the piano. Violin being a bowing instrument a note can be sustained for a longer time than on the piano.

When we try to form an orchestra based on South Indian instruments, the violin naturally may be selected for the important place. But the technique of the violin playing, here, has never advanced when compared with the West. The reasons for this technical imbalance are many. Only in the eighteenth century has this instrument been adopted into our musical system. The compositions made use of are, the vocal works which cover a range of only about two octaves, whereas in the West, there have been compositions meant for instruments since early times and these have aptly suited the particular instruments to bring out from them fully their capabilities, colour and technique. As examples may be quoted the compositions for strings also - the twelve grand concertos of Handel; the concerto 'Grossi' of Correlli. The viol had been in existence in the West and was replaced by the violin in the seventeenth and eighteenth century, almost completely because of its supremacy. The instrument as well as the technique of the instrument-playing, developed to great heights in the Baroque period. The players were expected to have a sound technique before appearing on the platform. The Western compositions demanded of the violinist a good bowing control, a profound left hand control in the form of capacity to play in different positions over the finger board at least up to three octaves. There are composers who have used even as many as four octaves, e.g. Our South Indian violinists invariably use the first, third and the fourth positions. Higher notes involving higher positions are rarely attempted by them. The awareness of the fact that each string has its own quality has made the Western composers compose different passages indicating the particular string on which they are to be played.

The South Indian compositions in addition to their limited range of octaves. are either in the moderate or slow tempo and

there are none what-so-ever in the fast. The Indian violinist does not pay much heed to the bowing technique either. In the West, this being an important factor, certain concise methods of bowing are practised. The compositions involve slur or detached notes and, for example in a sequential passage consisting of four notes, the first two, the last two or the middle two might have to be detached, creating a technical problem, unless one is endowed with a good bowing technique. The bow is expected to be held at the frog. Certain passages are to be played near the tip, certain others near the frog or with the middle of the bow. To bring about the different colours in a lively manner composers resorted to the use of muted passages; right and left hand pizzicato, double, treble and quardruple stop etc. Bach used chords of even four notes in his unaccompanied violin sonatas. According to Forsyth, a complete catalogue of all the possible chords on the violin would amount to nearly 1500 combinations. Bach compositions characterized by the difficult-to-play leaps and the bowing intricacies of imitative passages of the same part in different keys, may be taken as a typical example to state in short that the technique in Western music is difficult, but precise and well advanced. We may think of substituting violin with Veena. But this ancient instrument which is our own has its own deficiencies. It is not possible to play musical passages as fast or as slow as in violin· Its tone is also not so bold and it is best suited for chamber music. It is not possible to sustain a note for tonal continuity since it is a plucking string instrument.

After having an insight into the problems involved in using the pivot of the modern Western orchestra—the violin, we pass now to explore the depths of orchestration and instrumentation without which there is no firm foundation for an orchestra.

Orchestration is the art of scoring music for an orchestra. In orchestration, the composer makes a study of the order of instruments in an orchestra, their ranges, the proper notations for them, their general technical abilities which should include their limitations, and the art of combining the instruments for a balanced effect. A thorough knowledge of harmony is a pre-requisite for a good orchestration according to the modern

Western concept. Poor orchestration is many a time due to failure to understand the general musical structure and harmony rather than a faulty knowledge of orchestration. So unless one studies the principles of good part-writing, spacing and doubling there is no chance of composing good orchestral music even with a sound knowledge of orchestration. So it is obvious that orchestration, according to Westeners is necessarily based on harmony. Other important factors to be considered in orchestration are (1) *balance of tone* i.e., balance of higher frequency notes with lower frequency ones, (2) *balance of volume* between instruments and to give prominence to melody. For this, different signs as p, f, indicating softness, loudness etc., are employed (3) *balance of harmony*—this does not mean that all the parts should necessarily be of the same strength; often it is desirable that the outer parts should be the more prominent, but the middle parts should never be left too empty.

Instrumentation on the other hand refers to the study of individual instruments, their construction, history and abilities etc. There is a certain amount of overlapping between the two terms in the sense that the second, forms at least a part of the first. The composer has to familiarise himself with the capablities of the various instruments with special regard to their limitations. It is of no use to have the higher notes played pizzicato because, they are thin and ineffective. There should be no excessive indulgence in speed while performing a succession of pizzicato notes or, in the change from pizzicato (plucking) to arco (bowing) or *vice versa* lest they should sound clumsy beyond the limited speed. Of the double, treble and quadruple stops, the most convenient intervels for playing are the sixth and the next the third. Octaves, fifth and fourth again present themselves as problems of intonation. Western composers when composing for an orchestra with a clear knowledge of orchestration, instrumentation and harmony have no problem in producing the different colours, the tonal balance and the balance of volume between instruments.

Since there have been only compositions in the South Indian Music there has been no chance to study instrumentation. When we try to compose music for instrumental ensem-

bles, the lack of knowledge of instrumentation will be a great drawback. We do not have institutions to train composers. Another hazard presents itself in the form of having to compose in a purely classical manner, without violating the traditional ways which have been existing for a very long time. This seems an uphill task as the artist has to retain the improvisation technique. Besides the technical deficiencies, there would be limitation with the capabilities of the different instruments when they are all tuned to the same pitch in an ensemble. The formation of a 'melodic' will probably create monotony.

We do not have any system of notation which can indicate the various ornaments and embellishments that ought to be used. Our music has mainly been taught by demonstration (*Guru sishya* system). We will have to produce a precise system of notation to express all our ornaments and embellishments including the *gamakas* and in addition, we may have to modify the notation system for the different instruments to suit their capacities. if we are to achieve success at orchestration. We cannot predict how far we will succeed in producing a notation system which can bring out our deep classical musical expression. Even if we chance to get at a symbol to indicate the *gamaka* system we cannot expect all the players to perform in an identical manner since the number of shakes of *gamaka* played in one long note varies from player to player, and also because, some players play the *gamaka* shakes in slower tempo while some others play in a faster one. If we try to use simple melodies without the use of the complex *gamakas* there is every possibility of producing monotony rather than 'pleasing' music.

We do not have conductors too in the South Indian system and to form an orchestra in our system of music strictly adhering to our tradition and convention, will turn out to be an arduous task. We may have to borrow certain ideas from the West and sacrifice some of our own unsuitable traditions, in order to attempt at orchestration in the South Indian System of music. In film music there are already composers (music directors) who do orchestral compositions based on more of Western ideas using Indian instruments along with Western instruments and eliminating the *gamakas* as such or using in between these instrumental passages the pure classical instru-

ment as a solo instrument played in our classical fashion. Harmony is inevitably put to use on many occasions by these composers. For a better combination of the two systems men who have a sound knowledge of South Indian System of music and instrumentations must go abroad to learn the Western mode of orchestration, instrumentation and conducting, which are well advanced. Only then when he correlates both the systems together, will he be able to do justice to some extent. Without this and without understanding exactly what the Western concept of an 'orchestra' is, when we try to use the term 'orchestra' in our system to meet some ensemble of instruments and some form of composition in our system as 'orchestral music' we will be misled and this will lead to confusion and misunderstandfng about the words orchestra and orchestration. Instead, it is always better to use our own terms which have been in existence right from Bharatha period. Only when we get deeper into the Western system of music we would realise how little we know of that system, and what the wrong terminologies are that we try to apply into our system without understanding exactly what the modern concepts of their terminologies are.

So we may conclude that the solution for this puzzle resides in the creation likewise of a new system of music which would allow the adopting of suitable Western ideas into our music, rather than attempt to 'orchestrate' the pure South Indian classical music.

While presenting these unbiased views of mine before you, I leave it to you to ponder over them for justification.

Thiru B. K. Misra : The term "Orchestra" is a foreign term. It is understood in a specific sense in the modern times and harmony is an inseparable accident of it. It would be better if our objective is defined very clearly as to whether we are going to make use of the orchestra in the same sense as they use it in the Western music or not. As far as it could be seen from the discussions at the seminar some sort of melodic ensemble was meant for being introduced in the South Indian Music. If this is the aim of the seminar why not give an Indian name to the ensemble of musical instruments proposed for the

South Indian Music. Names like *"Sangha Vadan"* or *"Samoohavadan"* could be given to such ensembles or any other name could be chosen either from Sanskrit or from any South Indian language.

Indian music has been individualistic and creative. Every *raga* has its specific emotional content which a musician is expected to bring out in a subtle way, whether the musician be an instrumentalist or a vocalist. But now that we propose to have instrumental ensemble for the South Indian Music, it will be worthwhile to consider whether we are going to confine the musical compositions of such ensembles to *ragas* only or whether we will permit of some departures from them introducing patches here and there without caring for *ragas* It my opinion it is not possible to do justice to the emotional content of a *raga* by a musical ensemble. It would be better considering the theme and the emotion to be accomplished by a particular. group of performance, the *raga* aspect may not be strictly adhered to. Our experience shows that strict adherence to *raga* makes group instrumental performances somewhat insipid, some times making them monotonous.

Our country has a very rich heritage of musical instruments—some developed while others are undeveloped. The moment we think of group performance of instrumental music we have to consider the possibility of developing some undeveloped musical instruments to suit our performance. Needless to mention that in the effort of rendering a particular instrumental composition, there will be enormous possibilities of utilising the vast variety of tonal colour got from even unknown and undeveloped musical instruments. It would be worthwhile to think over the possibility and practicality of using the unknown and less popular instruments to make the performance more effective.

It is an acknowledged fact that a number of foreign instruments like violin, piano, clarionet and saxaphone have come to a stay in the country. In spite of this fact, it would not be out of place to consider the the possibility of using only Indian instruments for the purpose of group of instrumental performances. This will afford an opportunity to

discover and to develop some more Indian musical instruments that may be pushed to the wall, if not rescued in time and given the status of concert instruments. The development Centre for Musical Instruments, 32, Millers Road, Madras-10, under the auspices of the All India Handicrafts Board, is striving to develop a variety of undeveloped musical instruments that could be very beneficially used for instrumental musical ensembles. The Centre will be always willing to render assistance for finding out suitable instruments for any tone colour wanted in this field. Some instruments have already been developed at the centre as for example the Nārāyani Veena (harp like instrument), Portable Veena, the new type of violin, Tuntina Tambura, Ribless Violin etc. which could be used for musical ensembles.

In the cine field bold experiments are being made to harness the instrumental musical ensembles. Will it not be helpful to examine whether our proposed orchestration is going to be somewhat different from that of the cine-orchestra?

Thiru K. V, Sundararajan: It is to be stated that orchestration as an organised scheme was not prevalent in the early Indian musical scene although several types of instruments of wind, string and percussion were known to be in vogue. Orchestration of the type which involved raising or the lowering of the basic note or octave was present, in its most schematic form in the Vedic chants and Rāmāyana also upholds the *tristhāra-svara-bhūshita gīta* which was pleasing, as heard by Hanuman in Lanka. This triple *sthāna* was perhaps akin to the *udhatta, anudhatta* and *svarita* of the Vedic choreography. The organisation of sound patterns and phrases by one or more instruments is largely inspired from and in imitation of nature's own sweet and mellifluous sounds, in certain parts of the day, formed by chirping, humming and intonating calls of the birds, bees etc. That they produced certain emotional feelings in the hearer was also admitted and thus the orchestration either of nature or artificially by musicians, had an emotional pull, by the harmony and relief of the sounds. Kalidāsa's romantic hero Dushyanta fell a willing victim to such a mental disposition, when he says, *Ramyāni vīkshya Madhurāms cha nishamya śabdhāni-Paryutsukhī bhavati yat sukhitō pi jantuh.* The

plural in *sabdani* is significantly suggestive of an orchestrated cadence. The stark distinction between a silence and the quiescence of sound (or quieted after a spell of sound) has also been carefully watched by ancient poets who were nothing if not *rasikas* Hence it was we have such observations as

Nisi suptami-vaika pankajam
viratabhyantara ṣaṭpadasvaram.

The *pranava* or the *omkara* spell in its sound effect had equally been philosophised as the Nādabrahma and Goddess *Amba* who is sangīta-mātrika is called *Omkara panjara sukī, upanshadudyāna kéli kala kantī* and *agamavipina mayūri,* thereby the orchestration of the parrot, the cuckoo and the peacock in the forest have been woven into a sound unit. But organised orchestration as a melodic aid in musical composition or in dramas had never been present in India until the advent of European classic music in the 15th century A. D, and later.

Dr. L. Isaac: Musical instruments have played an important role in the religious and social lives of the people of the India. From primitive times, when man wrested her secrets from nature and learnt to make musical instruments to accompany his song and dance, to the present day, they have lent charm and glamour to musical performances all over the world. A vocal concert without its appropriate accompaniments, will fail to establish contact with the listeners, and a dance performance without the prescribed instruments, or at least a drum will be, as Bharata says, like a picture without colours.

The voluminous Vēdic literature deals with a variety of subjects, specially with regard to the various sacrifices, their meaning, and the rules for performing them. The Saman hymns were sung by the priests, to the accompaniment of the Vīna played by their wives. The *Vīna, Vēnu* and *mṛdanga* were also, used to accompany Védic singing. Speaking of the Mahāvṛta sacrifice, the *Brihadāranyaka Upanishad* says that, during the ceremony the *vāk* or sounds produced by the Gods, are believed to hide themselves in various places. Since these sounds are essential for the successful performance of the rituals, the priests caused them to be played on the instruments like the

Dundubi, *Bhūmidundubi Vīna*, *Satatantri Vīna* an *Khanda Vina*. The use of not one, but many musical instruments was essential during the various sacrifices. Even during the Vēdic period as far back as B.C. 1500, many instruments were used simultaneously, and to this may be traced back, the origin of Orchestras, Vādyabrindas or Kutapas.

Bharata in his *Natya Sastra* speaks of Tata Kutapas and Avanaddha Kutapas. A group of instruments played together is called a Kutapa. It is the same as the word Vādya Brinda or Orchestra used at the present day. Unlike our Orchestras which include all the varieties of instruments, during Bharata's time there were instrumental ensembles consisting purely of stringed or of percussion instruments. Thus a Tata Kutapa consists solely of stringed instruments. The musicians of each Kutapa were attached to the temples and were obliged to give their services entirely to the temples, whenever they were called upon to do so. We also find references to Vamsaka Brinda or group consisting of wind instruments alone.

Both Bharata and Sārngadēva, have described the Kutapa which provides music for the *natya* performance. Bharata says that the *mṛdangika* should sit at the back of the stage facing east, and to his left should sit the *panavika* and other drummers. The singers sit at the east facing south and the *Vainikas* sit in front of the other instruments. The flutist sits behind. The *Vainikas* are made to sit in front so that the feeble tones of the Vinas could be heard by the audience. The number of Vādyas in Sārngadēva's *Natya Kutapa* is forty eight consisting of drums and wind instruments. The absence of Tata Vādyas may be attributed to their weak tones which will be drowned by the drums and the flutes.

Archaeology is a valuable and authentic source for the study of music and musical instruments. Sculptures found in monuments and temples all over India, bear witness to the extensive use of musical instruments for various occasions sacred, as well as secular. Rarely do we find any instrument being played alone. For every occasion, be it a procession, a dance performance, a purely musical performance, or marching of armies, groups of musicians are seen to be playing on the

three types of Vādyas. In the great *stupa* at Sanchi (3rd century A.D.), King Asōka and his queen with attendants, are seen going in procession, accompanied by three musicians playing on conches, two on flutes and three on drums.[1] Another panel on the pillar in the Northern gateway shows a procession going round a *stupa*, moving forward to the music of the harp, kettle drum, two kinds of tambourine, a double flute and two curved trumpets.[2]

An exquisite piece from Amarāvathi housed in the British Museum depicts a scene from *Mandhatu Jataka*. Here we see a dance performance entertaining Mandatu and Sakka, seated on a throne, surrounded by women, sitting or standing. At the left foreground are two women dancing to the music of a huge orchestra consisting of drums, cymbals, conch, flute and guitar-shaped harps, The whole ensemble is very artistically arranged.[3] Altogether there are about a dozen musicians playing on drums, harps, flute, cymbals and conch. This may be said to be a *Nātya Kutapa*. There is a wealth of such material all over India bearing evidence to the fact that many musical instruments were played together for all occasions.

Instances of the use of large groups of musical instruments may be gathered from literature also. In Tamil the term used for such groups is "*Palliyam*". We come across this term in connection with various events. When Lord Muruga comes to Tiruchīralaivāi, the sounds of "*palliyam*", including trumpet, Kombu, conch and drum, are heard, welcoming him.[4] When Tirugnānasambandar entered the palanquin presented by the people of Tirunelveli, we are told that,

> "*sanka, dundubi, tarai bhērimudal*
> *pongu palliyanādam polindezha*"[5]

there arose the sounds of instruments including *sanka dundubi, tarai bhēri* and trumpet. When Sambandar defeated the Jains

1 & 2. J. Marshall & A Fourcher—*Monuments of Sanchi*.

3. Douglas Barrat—*Sculptures from Amaravati at the British Museum No. 12*.

4. *Tirumurugatrupadai* L. 119—124.

5. *Tirutondarpurāṇam*. V. 33. Tirugnanasambandar.

by curing the Pandya King, again we are told *"alaviranda palliyangal muzhangi arltum"* that the triumphant sound of innumerable instruments was heard.

References to the combined use of many vādyas can be collected from Sanskrit literature also. When Sri Krishna, arrived at Indraprasta, he was welcomed by the people, with the music from the *mṛdanga, sankha, pataha, vina, panava, gōmukas* while brahmins danced and sang. A very beautiful description of an Orchestra is given in the *Naishadiyam* of Harsha. When Nala arrives at the bride's palace for the marriage ceremony, music, both vocal and instrumental falls on his ears.—the sound of bells, harps, flutes, tyres, drums, cymbals and tabors. We are told that the Iyres were not drowned by the flutes by the singers, nor the singers by the cymbals. The cymbals were not eclipsed by the tabors or the tabors by the drums. Each instrument sounded clearly, exhibiting its individual quality, but at the same time sounding in consonance with the others. This is a wonderful description of how exactly an orchestra should sound[1].

In South India we have a number of instrumental ensembles used for various purposes. Some are used in classical music and dance, some in temples, some in villages and some, during times of war. They lend beauty, charm and richness to the services in the temple, the social lives of the people in the villages, and they infuse courage and enthusiam into the armies during times of war. It is said in the *Bhagavad Gita* that when Sri Krishna and the Pancha Pāndavas blew their conches together, the terrific sound struck terror into the hearts of the Kauravas and their allies.

The *Sarva Vādyam, Panchavādyam*, and the *Ashtadasa Vādyam* may be said to be *Vādya Kutapas* belonging to temples. The first is a ritual which takes place once a year in some temples in Tamilnad, like the one in Cheyyur, where God is worshipped in the three aspects of *Gita, Vādya* and *Nritya*, Here all *Vādyas* of the stringed, wind and percussion varieties are played, each one individually at first, beginning

1. Harsha. *Naishadiyam*—Sarga 15, 16, 17, and 18.

with the wind instruments and followed by the percussion instruments. Finally all the instruments are played together, as a crowning conclusion to the ritual. This concerted action of all the instruments cannot be called an orchestra in the modern sense, but the fact that such a large number of instruments were used shows that joint action of instruments was not unknown in early times. Different musical forms and varieties of dances are also performed. On the whole there are about forty items, taking about three hours to perform.

The *Panchavādyam* is an Orchestral group found in Kérala temples. This is of two kinds the *Sévānka Panchavādyam* and the *Kriyānka Panchavādyam.* The *Panchavādyam* is played during festivals and is somewhat like the *Sarvavādyam* but no *gita* and *nritya* figure here. The *Sévānka Panchavādyam* is more important and it is this which is generally called *Pancha Vādyam.* This group is called *Pancha Vādyam,* because it consists of five instruments. Here the *Chénnala, Timila* and *Sankha* are the principal *Vādyas.* The first is a gong like the *Sémakkālam* of Tamilnādu. *Timila* is a long slender drum, 27" long with heads of diameter 6". On the inner side of the skins, a thin wire is stretched which vibrates when the instrument is played' producing a pleasing sensation. Here the elements of both stringed and percussion instruments are combined. *Sankha* is the ordinary conch. Along with these the *Idakka* an hourglass shaped drum and the *maddalam* are also included. *Upavādyas* like *Kombu* and *Kuzhal* are introduced at times. Sometimes the *Chénnalā* is substituted by the *Ilatalam,* a pair of Cymbals. The *Sévanka Pancha Vādyam* is usually played during festivals.

The *Kriyānka Pancha Vādyam* consists of *Veeku Chenda, Timila, Chénnala, Sankha* and *Kaimani.* The *Veeku Chenda* is a larger variety of the common Chenda. The first three instruments are played continuously, while the conch is played only at the beginning of the performance. This *Panchavādyam* is played during *Srībali* procession and for special services like *Utsava Srībali* and *Ashtabandana.*

The *Ashtadasa Vādyam* is a band formed of eighteen instruments consisting of stringed, wind and percussion instruments and is played in some temples in Tamilnad. This is

mentioned in *Vatulagamam*. Of these the majority (13) are percussion instruments, *Kakala*, *Turya*, *Vénu* are the wind instruments and Vina and *Tumburu*, the stringed instruments.

The *Periamélam* and the *Chinnamélam* also play an important part in temples. These would have had their origin in temples. The *Periamélam* or *Nagasvaram* band appeared in South India in the 15th and 16th centuries, according to inscriptions found in temples such as Tirupati in Āndhrapradesh Shimōga and Davalapura in Mysore State and in Simhapurinathaswāmi temple, in North Arcot in Tamilnad, The Periamélam consists of the *Nagasvaram*, *Ottu*. *Tavil* and *Talam*. A conch is included sometimes to play the *jatis*. Sometimes an additional *nagasvaram* and *Ottu* are also introduced *Nagasvaram* bands are maintained in temples, to provide music for the various rituals, which take place at particular times of the day. It also plays an important part in classical music and also during social functions.

The *Chinnamélam* is the dance band which also had its origin in temples, where the dance of the dévadāsis was part of the worship offered to the deity. This consists of the drone—usually the bagpipe in early times—flute, *maddalam* and *talam*. The Nattuvanār also forms part of the band for reciting the *jatis* (*Nattuvāngam*). Very often flute is replaced by the clarinet because of its deep rich tones and also because of its capability to produce varied pitches, which is not possible in the flute. In dance concert, the compositions from *Alarippu* to *padavarnam* are sung by men. But the *padas* and the subsequent pieces are sung by women, which necessitates a change of *sruti*. If the flute is used, the player will have to carry with him many flutes to play the different *srutis*. The introduction of the clarinet by Mahādéva Nattuvanār, made this unnecessary, because it could provide the required pitch without change of instruments.

During the annual *Pūram* festival in Trichūr in Kérala, the caparisoned elephants of the temple are brought to the courtyard in front of the Vadakkunādan temple, which stands in the centr of the town. About twenty to thirty *chenda* players, sitting on these elephants, play on the *chenda*, while others blow the

Kombu, producing a deafening sound. This play of twenty to thirty *chendas* together, puts one in mind of the *Avanaddha* Kutapa of Bharata. Another band consisting of *Māram Timila, Sankha, Chĕnnala* and *Chenda* is seen in some temples in Kerala. This is known as "*Panikottuka*". Marans are the traditional drummers in Kerala.

The village folk of India have developed hundreds of musical instruments, each with a distinct shape, construction and technique of play. There are simple as well as elaborate ones created in the first instance to please the Gods. The tribes of India have a great love for music and an extraordinary talent for making musical instruments from materials of their own environment. Many of these instruments were grouped together and played as bands on special occasions like temple festivals, dance and also merely for entertainments.

"*Sangita mĕlam*" is the name given to the classical orchestra in the South. This came into use during the Nayak period. It is referred to in *Ushāparinaya*, as a group consisting of all musical instruments, vocal and dance. Sahāji (1684—1712) refers to it in his *Pallaki Sĕvaprabandham* in the ninth daru, describing the ceremonial arrival of Siva in his palanquin. *Sangita mĕlamutōnu sannutincini Dĕvani*", Many folk orchestras also are found in South India, consisting mostly of wind and percussion instruments. Stringed instruments rarely figure in these as these are generally mobile orchestras. These are also known as '*mĕlam*' as in *Naiyāndimĕlam*.

Folk music bands of the South are *Naiyāndimĕlam, Singaram, Urumimĕlam* and *Villupattu* or *Villadivādyam*. The *Naiyandi mĕlam* is a music band of Tamilnād and is used as an accompaniment for folk dances, like, *Karagam, Kāvadi* dance and *Poikālkuthirai āttam* (Dummy horse dance), It consists of wind and percussion instruments. The melody is provided by two *nagasvarams* and an *Ottu*. Along with this, two *tavils* and one each of *Pambai* (a pair of cylinderical drums), *Kirikitti* (a pair of conical drums), *dolak*, and Cymbals are played. Altogether there are nine players. They stand in a circle round the dancer, who balances a *Karagam* or a *Kāvadi* on his head. As the dance proceeds, the instrumentalists also move along

with the dancer and perform similar movements. The balancing of a small pot, with a huge flower arrangement on it is a breath-taking sight. This may be something like the "*Kudakūttu*" mentioned in *Silappadikāram.*

The *Singāram* is another band of five musicians, two playing on small *nāgasvarams,* two on small drums and one on Cymbals. This is used in temples, during marriages and even during funerals. It is a speciality of the Ādivāsis of the village of Tandikudi in Madurai district, a place where music is still untainted by film music. The *nāgasvaram* used here is short and about 15" in length, with six finger holes. The additional five holes of the common *nāgasvaram* is not found here. The music played is limited to one octave. The *nāgasvaram* is called *sattakuzhal* because it produces the tune (*sattam*). This band does not have a drone, but in order to create the effect of the drone, the *nāgasvaram* players rest on the note 'sa' for a full *āvarta* after playing the tune. This alternation of tune and the *sruti* produces a very attractive effect. The *nāgasvaram* is made of *Kumizha maram* or *Todagattimaram,* the bell is of metal and the mouth piece is of reed and is known as *nānalseeti.* The music is very simple, the *raga* commonly used being *Hari-kāmbhoji.* This band is called *singāram* or beauty, because it produces beautiful music.

The *Urumimélam* is another rustic band of the South. This is used in *Urumi Kōmāli āttam.* The *Urumi* is a two faced drum in which the left face is played with a straight stick and the right is stroked with a bent flat stick producing a squeaky sound. Along with this are played the *nāgasvaram tavil, dōlak* and cymbals. Sometimes a long pipe or flute, called *Neenda Kuzhal* is also used. The *Urumi* is used by mendicants going about with a *bhoomadu* or temple bullock. Sometimes a double flute, one straight and the other with a bell is also used. The straight one has five holes and produces the tune, while the other gives out the drone.

The *Villupāttu* or *Villadivādyam* is a percussion band found in Tamilnadu and in Kérala. Instruments like *Villu, Kudam, Tālam,* and *Kāshta* and *Udukku* figure in this band. The bow is about 6' in length and is balanced on a large *kudam* which

rests on a thick ring placed on the floor. Five to eight singers and players take part in this. The leader of the band sits in the middle and strikes the chord of the bow with two slender wooden rods, which have tiny bells fixed to them The wooden frame of the bow also has about a dozen bells hanging from it and so when the chord is struck all the bells jingle and produce a very pleasing effect. On the left of the main player, who is also called the Pulavar, sit the *Udukkai* player and the one who plays on the Kudam striking it with a flat piece of leather. On the right side of the leader sit the two who play on the *tālam* and the *Kāshta*. All the artists play on their instruments and also accompany the singer vocally. Heroic themes like Kattabomman Kathai and Sudalaiamman Kathai figure in the songs. This is performed with great enthusiasm and is a thrilling experience and entertainment to the listeners.

From the 6th to the 13th centuries, in many inscriptions, in Tamilnad, Mysore and Andhra pradesh, we come across the term *"Panchamahāsabda"*, as being a title held by kings and also as titles conferred by certains chakravartins on feudatories who found favour in their eyes. When the Kings or these feudatories went out in procession the five instruments were played before them. They were also played during times of war, during temple rituals and even during marriages. We are told that they were played during the marriage ceremony of Sri Rama and on the first day of the Kurukshetra war. The instruments constituting this band are *Sṛnga, Sankha, Tammata, Bhēri* and *Jayaghanta* of which the first two are wind instruments and the others percussion instruments. Stringed instruments were not included, because their mild tones would be drowned by the loud tones of the other instruments. Moreover stringed instruments cannot be used during processions for which generally the *"Panchamahāsabda"* is used.

These are some of the Orchestras or Kutapas in use in the South, in various walks of life. It is not correct to think that Indians did not develop the orchestra and that it had its origin in the West. The Kutapas of Bharata, the *palliyam* of Tamizhisai and the *Sangita mēlam* of later times, show that playing of groups of instruments existed from as early as 2 B.C. While Western orchestras are for harmonised music, in Indian

orchestras, only the melody is heard, but richness is given by the blending of the tone colour of various instruments and the rhythmical accompaniment of percussion instruments. Both are beautiful in their own way and are in keeping with the musical traditions of their places of origin.

S. J. George Thalayil: The term orchestra has been derived from the Greek word Orchesisthai which means dancing place. Now, an instrumental ensemble or the ground floor of the modern theatre is called orchestra, though originally, the word orchestra was used to describe the nuclear centre of the theatre arena, where music and dance were performed. In India, Bharata uses the term 'Kutapa' to denote orchestra and the 'Kutapas' were used mainly for dramatic performances. India was very much advanced in the field of dramaturgy from the time of Bharata. In those days, the dramas were constituted by music (vocal and instrumental) and dance besides dialogue. Hence, the orchestral music was in existence from that period itself in India. The sculptures and bas-reliefs and music and non-music literature also prove that orchestra was prevalent in India from very early times, though not in concert form but as an accompaniment for dance performances and rituals.

As India has a rich variety of musical instruments, there can be a successful logical combination of stringed, wind and percussion group of instruments to form a melodic orchestra. It is erroneous to assume that orchestra is suited only to the harmonic type of music. As there are two systems of music, harmonic and melodic, there can be two different types of orchestra, harmonic and melodic. In India, we can very well produce a melodic orchestra.

Todate, every religious and social function in India is celebrated with the music of instrumental band but it is unfortunate that we have not so far developed orchestral concerts in South India. Recently, All India Radio is encouraging the orchestral concerts and many composers have composed orchestral pieces.

The main problems in the production of South Indian Orchestra, are the style of music, pitch, notation, scoring and arrangement of instruments. In the West, the orchestral music has become very well advanced. By introducing new devices

which will suit to our style of music, we can produce successful orchestras. An efficient conductor with his able musicianship, artistic interpretation and creative imagination can make the orchestra successful. Advancement in the field of orchestration is very necessary in South India, as it would not only provide joy for listeners as a concert piece but also will be of tremendous help for the production of operas in South India.

Leader's concluding speech: Prof. Sāmbamoorthy remarks that orchestra came into existence during 18th century. But it is well-known that melodic orchestras were in vogue from 2nd century A D. As we have only melodic type of music, our orchestra from the beginning must have only melodic orchestral type. Regarding *Vadyaprabhandha* and *Mukhagitas*, todate we have not yet heard any of our old *vadyaprabhandhas* or *Mukhagitas* played by any orchestral group and their names are found only in the texts.

Thiru T. Sankaran has remarked that it would be interesting to find out the distinguished conductors of our South Indian orchestra in the early days and also in later ages. It has to be remembered that in early days or at present the *Periyamēlam* and *Chinnmēlam* do not contain a vast number of instruments and the instruments played merely as a group, the compositions of great masters. Hence there is no necessity for scoring and no conductor is needed for such small bands which merely play the composition in identical version collectively.

It is a questionable statement by Dr. Alamelu Govindārajan whether we can say that "the orchestra as a structure of musical genius and intellect was developed by Western musicians and has been a part of Western music for some centuries now." The playing of instrumental ensemble is not at all alien to India. Orchestra is used in the sense of a performance by a group of instruments. From the time of Bharata we have melodic orchestra. Orchestral music is of two kinds—harmonic and melodic. Harmonic orchestra flourish in western countries and ours is completely different from them. Hence it will not be proper to compare the term orchestra with the Western orchestra. Orchestra is not used in the sense of "Sounding" of many mnsical instruments, but, "Playing of Melodies" by many instru-

ments. Also, the Raga Improvisation is not a hindrance for Indian orchestral music because in a melodic orchestra only the compositions will be aptly scored and will be presented to the audience. Hence, the point that precise script notation for raga elaboration is necessary is without force.

Dr. L. Issac remarks that the *Sarvavadhyam*, *Panchavadhyam* and *Ashtadasavadhyam* may be said to be vadhya kutapas belonging to temples. She has later explained the "*Sarvavadhyam*".. In this context it will not be appropriate to include *Sarvavadhyam* in Vadhyakutapas with *panchavadhyam* and *Ashtadasavadhyam*. *Sarvavadhyam* is only a temple ritual wherein many items figure and among these items orchestral music also figures and is considered as one of the modes of worshipping God.

The statement by Thiru K. V. Soundararajanthat "organised orchestration as a melodic aid in musical com position or in dramas had never been present in India until the advent of European classical music in the 15th century A.D. is objectionable. "The sculptural and literary evidences which have been mentioned in the main paper bear eloquent testimony to the fact that melodic orchestra was in vogue even from pre Christian and early Christian era in India.

Regarding G. Thalayil S. J.'s paper, it has already been agreed by many Indian Musicologists like Prof. P. Samba moorthy that it is erroneous to think that orchestra means the performance of harmonised music, As there are two systems of music in the world, harmonic and melodic, there are two types of orchestras, one which plays harmonic music and the other which plays melodic music. Another point is that, the instrumental group will not play the raga improvisation in a group. The composition will be scored and the instruments like Veena, *Gottuvadhyam*, Violin etc., which can play the South Indian Music perfectly well will be included in the orchestras to bring out the subtle nuances (*gamakas*). So, the production of subtle nuances or gamakas is not a great task for South Indian Classical Orchestral performance.

Dr. L. Subramaniyam's view regarding the orchestration of South Indian Music is objectionable. We cannot say that

orchestration is difficult in South Indian Music as we do not have harmony and the unfamiliar melodic progressions. We are not going to organise a harmonic orchestra. Based on our melodic type of music, our orchestral music will be also of melodic type. When the term orchestra is used, it should not be taken in the Western concept of orchestra. The term orchestra is used in the sense of instrumental ensemble. We have melodic type of orchestra from the time of Bharata. He has used the term Kutapa to denote orchestra. Dr. Subramanian also compares the two systems of orchestra but it is not advisable to compare any system of music with another. Each system has got its own individual style and beauty. It looks rather funnv to note that if we use the term orchestra to denote instrumental ensemble, we should follow the Western orchestral methods. There are of course, problems in setting up a melodic orchestra but in this seminar, we have come to analyse as to how to overcome these difficulties in setting up a melodic orchestra. The explanation for harmony and melody, description of Western orchestra and violin playing in detail and the concepts of Western orchestration are though very interesting irrelevant to this paper. Dr. Subramanian thinks only of Western orchestra, and his suggestion of thoroughly westernising our system of music by going to the West, and learning the western mode of orchestration, instrumentation and conducting is unsuitable for South Indian classical orchestra. It is not at all necessary that we should use only the terms Kutapa or *Sangītaméla* or *Palliyam* to denote a group performance by many instruments. It is only that individual's ignorance or mistake to thinks at once of Western orchestra when one hears the term orchestra. Dr. Subramaniyan's view of westernised South Indian Music orchestra will be only a curse for the South Indian Music lovers.

Thiru B. K. Misra has the wrong notion that orchestra means an instrumental ensemble "in the sense of What Westerners do." But it is not so. The place in front of the stage was called an orchestra from the Greek word orchesthai meaning dancing place. Todate the group of instrumentalists is seated in front of the stage in a play. Therefore we call the group of instrumental playing as orchestra in English as its place is usually in front of the stage in a play or opera or ballet.

We have many vernacular names for orchestra such as *Vadyasamooha, Vadyabrunda, Vadhyagoshti, Jhankar, Jantra-sammelan etc.* The AIR todate is using the varnacular names according to the region. There is no necessity now for us to give a common name for orchestra. The choosing of a common Indian name from the vernacular names in India, will create many problems and will lead to unnecessary disputes irrelevant to musicians and musicologists, As the discussion of the seminar today is in English, the term 'orchestra' is used to denote *Vadyagoshti* and if it is on any of the regional language, the regional term will be adopted. Orchestra does not mean Western orchestra alone, with harmonic music but any instrumental group performance is called an orchestra whether harmonic or melodic.

Finally, every musician and musicologist must try their best to solve the problems facing today's orchestral methods in bringing out South Indian Classical music orchestra instead of simply arguing for the calling of the term orchestra or by merely tracing the historical development of Indian Orchestra. I thank the Director Dr. K. K. Pillai, Institute of Traditional Cultures, University of Madras, for having given me this opportunity to lead this seminar and the great scholars who have participated in the seminar and gave their valuable suggestions.

Winding up the seminar the Director said: We have had a very useful seminar. There has been a good discussion for and against orchestration with reference to South Indian Music. I am thankful to the leader, Thirumathi S. A. Durga and those who participated in the discussion. In due course the proceedings of the seminar will be published in the Bulletin of the Institute of Traditional Cultures and complimentary copies of it will be sent to all of you. Thank you.

OBITUARY NOTICE

We deeply regret to record the death of Professor P. Sāmbamūrthi, an eminent Musicologist of South India on 23rd October 1973. Readers of the *Bulletin* will remember his scholarly article on 'Kudumiyāmālai Inscriptions, in the last (January-June 1973) issue of the *Bulletin*. He always made it a point to attend all seminars held by the Institute on Music and give his valuable contributions.

A recipient of the *Padma Bushan* award, Prof. Sāmbamūrthi was honoured with the title of *Sangīta Kalānidhi* at the 46th annual conference of the Music Academy. Madras, in 1972. He was elected Fellow of the Sangeet Nātaka Akademi in 1963 in recognition of his services to music. An active promoter of music education, Prof. Sāmbamūrthi was associated with a number of universities. He was Head of the Department of Indian Music at the Madras University for 25 years from 1937. From 1961 to 1964, he was the Director of the Sangeeta Vādyālaya in Madras and did yeoman service by inventing many new instruments and introducing new elements to the present instruments. Next he was the Professor of Musicology at the Sri Venkateśwara University, Tirupati till 1966 and afterwards, he came back to the Department of Indian Music, University of Madras under the University Grants Commission scheme for retired Professors.

He visited and delivered lectures in Paris, Vienna, Moscow and Tokyo. He led a Music Delegation for the South-East Asian Regional Music Conference in Manila in 1955. He was a Vice-President of the International Society for Music education for a term. He was associated with almost all the music Departments and organisations throughout India.

Prof. Sāmbamūrthi was the author of more than 50 books on South Indian Music, and was the first person to bring out the songs of *Noukacharithram* with notation. His style of notation being simple and clear any musician can learn a song from his book. He organised Vādyabrundas in South Indian Music and also paved the way for group singing in Carnātic Music. He demonstrated the possibility of a number of newly possible scales in his text books on South Indian Music. Among his books, special mention should be made of the Dictionary of South Indian Music in three parts, Biographies of South Indian Musicians and composers and, Editions of different operas in South Indian Music. Besides being a musicologist, he was a composer of songs. His demise is an irreparable loss to the music world of Tamil Nād.

—*Editor*

REPORT OF SEMINARS—II

The following is a report on the proceedings of the seminar on 'Western Influence in the Traditional Sculptural Art of South India' led by Thiru A, V. Jeyachandrun, M.A., B.L.., State Information Officer, Madurai on 12th September 1972 at Room No. 48 of the University Departmental Buildings Madras-5.

Present: Director: Dr. K. K. Pillay M.A., D,Litt., D.Phil (Oxon).

Leader: Thiru A. V. Jeyachendrun, M.A., B.L.

Others:

1. Thiru A. Amanullah, Department of Ancient History and Archaeology.
2. Thiru T. Bālakrishnan, Department of Ancient History and Archaeology, University of Madras, Madras-5.
3. Thiru S. A. R. Bukhari, Professor of Area Studies, University of Madras, Madras-5.
4. Dr. R. Champakalakshmi, Lecturer, Dept. of Ancient History and Archaeology, University of Madras, Madras-5.
5. Thiru E. Divien, 19, Haddows Road, Madras-6.
6. Dr. M. S. Gopālakrishnan, Department of Anthropology, University of Madras, Madras-5.

7. Thiru S. Govindarāju, Dept. of Ancient History and Archaeology, University of Madras, Madras-5.

8. Thiru S. Gurumūrthi, Dept. of Ancient History and Archaeology, University of Madras, Madras-5.

9. Thiru C. M. Janārthanam, Journalist, 17B, Chellammal Street, Shenoynagar, Madras-30.

10. Thiru P. Krishnarāj, Dept. of Ancient History and Archaeology, University of Madras, Madras-5.

11. Thiru R. Krishnarāu, Artist & Designer, 22, First Cross Street, Trustpuram, Madras-24.

12. Thiru T. V. Kuppuswāmi, M.A., Sri Pushpam College, Poondi, Thanjavur district.

13. Thiru P. C. Manavarindakul, IInd year M.A. in Ancient History and Archaeology, University of Madras, Madras-5.

14. Thiru N. Murugésa Mudaliār, No. 15, Dr. Sadasivam Road, Thyagarayanagar, Madras-17.

15. Thiru T. Muthukannappan, Professor, 'Avvai Akam', 3rd Street, Bhaktavatsalam Nagar, Madras-20.

16. Tmt. L. S. Nādhan, Director of Tourism, Government of India Tourist Office, Madras.

17. Thiru D. Natarājan, Gazetted Assistant State Planning Commission, University Buildings, Madras-5.

18. Thiru R. Ponnusāmy, E.5, Murugesa Naicker Mansion, Triplicane High Road, Madras-5.

19. Thiru C. E. Rāmachandran M.A., M.Litt., Head of, the Dept. of History, University of Madras, Madras-5.

20. Thiru R. Rāmaswamy, 53, Gangadareswarar Koil Street, Purasawalkam, Madras-84.

21. Thiru B. Ranganāthan, 37, Dharmaraja Koil Street, Alandur, Madras-16.

22. Thiru R. N. Sampath M.A., Curator, Oriental Manuscripts Library, University Buildings, Madras-5.

23. Thiru Shanmugham, Tirukkural Research Dept., University Buildings, Madras-5.

24. Thiru Shanmugham, Dept. of Ancient History and Archaeology, University of Madras, Madras-5.

25. Thiru A. Subramaniam, C/o Thiru K. Veerasamy, 5, K. M. P. Koil St., Ayanpuram, Madras-23.

26. Thiru A. Subramanian, Research Student, Dept. of Ancient History and Archaeology, University of Madras, Madras-5.

27. Thiru A. Swāmy, Lecturer, Dept, of Ancient History and Archeology, University of Madras, Madras-5.

The Director welcomed the invitees to the seminar, introduced the Leader to the audience and invited Thiru Jeyachandrun to lead the seminar.

Leading the seminar, Thiru Jeyachandrun said:—

I am indeed grateful to Dr. K. K. Pillai, the Director of the Institute of Traditional Cultures for having given me an opportunity to lead this seminar on the Western Influence on

the Traditional Sculptural Art of South India. A summary of the paper has already been circulated amongst the participants and from it one may have had an idea of the central theme we propose to discuss this evening. The study is confined to the Nayak period and particularly to the stately pillar sculptures found in Meenakshi temple, Madurai. The influence of the West is seen no doubt in the sculptures of the periods preceding the Nayaks in territories other than the Southern Districts of Madurai, Ramanathapuram, Tirunelveli and Kanyakumari and as the study of all these sculptures will take us as under, I intend confining my remarks to the Madurai pieces only. I have carefully prepared some slides to illustrate my points and will screen them in the sequence to indicate the new trends which had crept in the Traditional Sculptural Art. It is to be noted that the period around the 16th and 17th century was an era of Art and Literary revival throughout the universe. Innovations in Art and Literature in almost all the nations were noticeable. It was an age when curiosity to know more had been kindled by the discovery of trade routes etc. and artists were vying with each other to strike newer paths.

Before proceeding to the subject proper it would be useful to remind ourselves of certain basic concepts of the Indian Traditional and Western Traditional Art. No term has been so elusively and illusively defined as 'Art'. Volumes have been written on it and very few seem to have understood it. Searching for the definition of Art amidst Tamil Literature, I was particularly struck by a passage from *Thevaram* (8th Century) of Sundara Murthi Nāyanār one of the canonised saints of Saivite religion which read as follows:—

"Kalai malintha Sīr Kannapparkku Adiyén". In this passage Sundara Murthi describes Kaṇṇappar another canonised saint as 'Kalai malintha Sīr Nambi' full of artistic faculties. It may look preposterous to glorify Kaṇṇappar a hunter, one who killed animals with the title "Kalai malintha Sīr Nambi". He possessed qualities which were diametrically opposite to those of an artist. However a little probe into the story and analysis of the passage would enable us to understand, the exact shade of meaning of the word "Art" meant to Tamils and particularly to the saint Sundara Murthi. Kannappar a hunter Prince, one day comes

out on an hunting bout and having killed a boar prepared himself to a fete when one amidst his gang spoke of a temple atop the neighbouring hill. Kannappar desired to visit the temple and while ascending the steps learnt of it in great detail, its Lord and rituals conducted there etc., On seeing the deity he lost himself. He washed the linga and offered pork to the God insisting on it to partake it. To him an eye of the Lord seemed injured. Without waiting, he pulled out his own and transplanted it. Seeing another eye of the Linga injured, he was about to pull out the other one too when the Lord seemed to have appeared and restored both his eyes.

What is important was the expanded awareness of Kannappar. To him Linga did not appear as stone as, the expanded consciousness made him see it as a living embodiment of a divine force. This new vision released him from the shackles of the logical conceptual mind.

In this new state he had the power of communion with the soul of the Linga. Indian traditions required an artist to possess this expanded consciousness and the things far beyond the narrow limitations of the perceiving senses. In this, the sense of spiritual, should take precedence over the sense of material beauty, and fidelity to the deeper vision within in his work becomes a prerequisite.

Indian Art equally demanded from the lover of Art, the same qualities, the power to see the spirit in things.

In today's discussion we confine ourselves to the art of Sculpture which had its moorings only in ancient countries, where it was conceived against its natural background and support—a great architecture. Egypt, Greece and India took the premier lead in Sculptural Art. It is difficult to consider Sculpture alone, divested from the other two, the art of architecture and painting, for, together these three arts appealed for ages to the spirit through the eye. It is in these arts that the sensible and the invisible met with strongest emphasis on themselves and had the greatest necessity of each other. The form with its insistent masses, proportions, lines, colours tried to express something intangible, and the spirit of the object needed the help of the material body to interpret itself through the human eye.

The Two Interlocking Powers:

It is in dealing with these two interlocking powers, the 'material form' and the 'spiritual content' that the West and East differed from each other. The West gave itself largely to the form while the East to the spirit. The Western mind got arrested and attracted by the form. To the West, form created the spirit and the spirit in its turn depended on the form for its ceaseless existence.

To the Indian mind the form did not exist except as a vessel to contain the spirit, from which all the meaning and values were drawn. The creative and reflective Indian mind went at once into the inner spirit of things and saw from it the outside. That is why often Indian sculptures never revealed themselves to those who looked at them in a mood of aesthetic curiosity. Indian sculptures are to be "seen in the lonelines, in the solitude of one's own self, in moments when one is capable of long and deep meditation and as little weighted as possible with the conventions of material life". In fact as already emphasised the viewer also required as much cultivated accent as the artist himself.

In the traditional art in both West and East the aim was one to make it functional, for every form of Art be it a painting, sculpture, architecture and, the slightest article of every day use, "is fashioned not only for its utility, but as an appropriate symbolical revelation of those supernatural powers that are believed to govern the terrestrial order" (*Art, East and West* Benjamin Rowland Jr. Cambridge). To make the sculptural art a symbol of a supernatural power; certain conventions regarding idealised beauty had to develop and canons respecting the proportions and measurements were hence evolved for generations under priestly supervision. The productions of these traditional sculptors were anthropomorphic and were not anthropometric.

The form and its measure:

What then was ths measurement that was followed by the traditional sculptors? The earliest in the West to distort the measurement of the human body to suggest the divine beauty of God was Polyclitus (450—400 B.C.) No originals of his

survived. However from Roman copies, the canons consisted of a ratio of seven heads to the total height of the body, verily a humanistic harmony of proportion based on the relationship of each part of the body to all the other parts and to the whole. This scale influenced the later generation of Greek and continental artists.

The traditions of the Indian Sculptural Art are embodied in Silpa texts whose dates vary from 3rd to 4th Century. In the texts are seen discussions on the northern and southern traditions in iconography. A set of Siva Āgamas of the North and another of the South, though of later dates, are found. So too' the tantric and other texts detailing the dhyanas for Gods and Goddesses seem to dwell on the Northern and Southern traditions.

The Southern tradition in sculptural art has adopted a ten division scale for the trinities and super-Gods. Known as *dasa tāla* it had three other sub-divisions to it named as *Uttama, madyama* and *athama dasa talas*. This scale is continued up to the *eka-tala* one measure, with the three sub-divisions in each of this scale. There was a smaller unit known as *ankula*. From 124 *ankulas* in the *uthama-dasa-tāla*, each *tāla* gets reduced by 4 *ankulas* till 8 *ankulas* of the *adhama eka-tāla*. Generally the trinities are of *uttama dasa tāla*, Devi in *madya-dasa-tāla*, Gods like *Subramanya, Indra* in *athama-dasa-tāla*. For canonised saints and evolved souls *madyama-nava-tala* is followed. Portraits of kings and humans are in the *ashta-tala* scale and so on.

A detailed discussion of this *tāla* measure will be the subject of a separate seminar, suffice it to state that the human figure here, is distorted in Indian tradition also, in an attempt to create a supernatural ideal. The proportions of the various parts of body are only abstractly related to the actual physical body. The moods or *Bhāvas* of deities are obtained as revelations in the expanded consciousness of the *silpis*. The repetition of *dhyana slokas* found in the silpa sastras, is one method to trigger off expanded awareness. In his prayers, the sculptor meditates on the slokas and obtains a mystical minute of expanded conciousness. The silpa sastras lay down only the 'skeleton' while the 'inner vision' provide the "flesh and blood". The artist trans-

lates this vision in his work. The great sculptural productions of the Pandya, Pallava, and Chola periods conform to these traditions absolutely. The artists achieve this great feat with no interest in human anatomy *per se.*

The spiritual content:

In the traditional West, the human figure was everything to the sculptors. It appealed to them as a beautiful subject in itself: the beauty being revealed in terms of muscular structure, action of the limbs and the revelation of emotion through expression or pose. In the Western approach to the sculptural art, the head, and the torso and the muscular divisions of chest and the abdomen have a square cut cubic shape collectively suggesting a stocky ideal of beauty. To the South Indian sculptor the figures are plastic vessels "filled with a potent continum in recognisable body forms".

Indian art traditions:

Though the earliest example of sculptures found in India belongs to the Indus Valley civilization, it is not until the Mauryan period (322—184 B.C.) that we were provided with data on which to base any clear conception of the history and development of Indian Sculptures as a tradition. The Maurya Court art reflects influences from Iran and the Western Hellenic powers. Side by side with this court art, a folk art that had a great influence on the further development of Indian art was taking shape.

Maurya art gave its place to Sunga Art of the Satavahana period (around 185 B. C.). It is a local art that "grew out of the soul of the people", characterised by simplicity and ingenuousness which are purely Indian. The technique already achieved in wood was transferred to stone.

Around the beginnings of the Christian era, Indian art was Buddhist art as, at that time Buddhism flourished throughout the length and breadth of this country. The three great schools of sculpture, Mathura, Gandhara and Amaravathi, that existed during the first to third centuries A. D. were responsible for some

of the finest achievements at Sanchi, Bharhut and Bodh-Gaya. The Gāndhāra school greatly influenced by the West became a centre of influence for Asia, affecting chiefly the art of China and to a some what lesser degree, that of Japan. The province of Gāndhāra with Taxila as capital, to which Asoka's rule extended, included a large part of present day Afghanistan. The contribution of the Gandhara school was the creation and development of the Buddha image, simultaneous with the Mathura school. Whereas the Gāndhāra school turned to Graeco-Roman art world for a model for the Buddha figure, the Mathura school drew inspiration from the Indian Yakshi figures of the earlier centuries.

Mathura was a great centre of Art from the 1st to 6th centuries A.D. Mathura art included Buddhist, Jain and Brahamanical works. The contribution of the Mathura school was the portrait sculpture-the only example in ancient India. While Buddha image it created was Indian, the portraits had Western influence.

Under the patronage of Satavahana (Āndhra) dynasty, Indian art entered a new phase. The Amarāvathi stupa and its carvings assigned to the period between 150 and 250 A.D. are the best example of the Āndhra art. It marks the end of an old period and the beginning of a new.

In the Gupta period (300 A. D. to 600) Indian art entered an important phase in its development. Some of the best pieces of Gupta art have been destroyed by vandalism in later times.

Traditions in South:

The stone sculptural tradition in South India seemed to commence with the Pallavas and the early Pāndyas and reached the hall mark of excellence during the medieval period under the imperial Cholas and the Imperial Pandyas.

After the decline of the Chola and Pāndyan dynasty and till the beginning of the sixteenth century, political insecurity did not provide the atmosphere for the flowering of the sculptural art. There was no overlord of the stature of the imperial Cholas or

Pāndyas to encourage art and also, the country suffered an attack from iconoclasts. It was the Vijayanagar kings who strove to keep up all Hindu traditions and during their period Sculptural Art rose phoenix-like from the ashes of its past glory. That was an age of revival and curiosity and art and architecture explored new fields. A distinct style of sculpture was evolved. In South India, sculptural traditions were fairly continued due to upsurge in religious movements in the medieval period. The need for sculptures for worship and for adorning the temples which were coming up in large numbers provided the impetus. The hereditary artists were on the job and the evolution of a new style to be in keeping with the times, without departing fundamentally from traditions became possible. However there was no great productions during 14th and 15th centuries.

The enlargement of the temples by the addition of *prakāras*, putting up several mantaps like the Kalyana mantap, hundred and thousand pillared mantaps provided for the artists new avenues. The conception of pillared sculptures was an innovation of the period. The pillared pavilions became ornate and the pillars themselves exhibited a new vitality seen in the intricate carvings and other decorative embellishments. In fact the continuing tradition in sculptural art had almost reached a sort of a zenith during the Vijayanagar period, and the last phases of it are observed in the temple sculptures of Srirangam and Madurai. At Madurai it fortunately came under the patronage of the Nayaks the erstwhile viceroys of Vijayanagar kings. In an anxiety to make a mark over their suzerains they seem to have undertaken building of temples of great proportions, the vestiges of which, we see all over the southern districts today. They, instead of picking up the trend of the Pallava or Chola or Vijayanagar style, injected into the already existing Pandyan building methods, and sculptural approach, a new strain hitherto unseen in this part of the country. The temple of Madurai received the best of attention under the Nayaks and turned out to be the most typical example of their art. The multiplication of pillars which commenced bearing life-like figures of Gods, Kings and donors is a special contribution of the Nayak period. A new pattern of pillar sculptures came to be carved which in the technique of carving, in their content and in

the display presentation, seem to be so different from the sculptures of the earlier periods.

In this light, an examination of the pillar sculptures of the thousand-pillared mantap, Pudumantap and later works of the Nayak period becomes necessary. Here are seen in one and the same place a plethora of sculptures of different styles: traditional, quasi-traditional and new styles. It is but pertinent to seek the source of this new inspiration for the sculptors who having reached a stage in the evolution of a highly stylised body, were craving for a newer approach and technique to depict the mystic symbolism in accordance with the spirit of the age.

The Neo-Sculptors:

It was about this time that the great movement in art and culture known as Renaissance had its origin in Italy. At the end of the 14th century and early in the 15th it was becoming international in scope. The twin currents of Renaissance thought were the humanism and the urge to realism. Between 1500—1520, three men of genius lifted the Continental art to its summit. Leonardo da Vinci paved the way, while Raphael followed suit Leonardo created life-like figures with mere half strokes blurred, outlines. Raphael depicted that ideal beauty. Michelangelo's colossal statues were vibrant with turbulent energy.

One of the most extra-ordinary phonomena in the Continental history of art was the rebirth, of the desire to reproduce real world in marble and bronze. Art which had hitherto been theocentric in conception had shifted its emphasis on man to describe him, his physical strength, valour and achievement. Once wedded to anthropo-centric conception, art eulogised the beauty of man's physical frame.

These neo-art movements in the Continent had deep impact in the minds of the learned and the Church. Missionaries, generally men of great learning and devotion had come to India, surcharged with these new ideas that had caught the fancy of the artists of the Continent from the fifteenth century. Missionaries have been carrying on their work unostentatiously and it is in the fitness of things that they discussed these new trends with the potentates they had met in this country.

The Portuguese were the earliest to set up colony and interest themselves in this land. A water colour made in 1628 entitled "Unmarried ladies-Indian and Christian", shows two ladies greeting a Portuguese suitor. Portuguese men frequently married Indian girls, who had been converted to Christianity. They encouraged Hindu craftsman to build their Churches perhaps by teaching them the new art of the Renaissance period. In fact many Indian paintings of the 16th century disclosed portraits of individual Portuguese and Englishmen with a sharpness which the European artists might well have admired.

The mixing up by the Portuguese with the Hindus led to an inquisition at Goa and five ecclesiastical councils were held. As a result, the Portugal King ordered the Viceroy to destroy Hindu temples, forbid Hindu festivals, banish their priests, punish makers of idols (*Portuguese Rule in Goa*, R. P. Rao, Asia Publishing House 1963). These drove the Hindu crafts men who had built Christian Cathedrals and Churches to seek refuge at the court of Madurai; and they brought with them their knowledge of the forms of the West (p. 285 *The Art of India*-Asia-Hienrich Zimmer). The local sculptors at Madurai had an opportunity to work with these neo-sculptors who had mastered the traditional Arts of both West and East.

Incidentally it may be mentioned that a century later, this western influence had extended to architecture and the evidence of the intensity of the impact is seen at Thirumalai Naik Palace. Built around 1650 A. D. this edifice bears ample testimony to the amalgamation of the features of oriental and occidental architecture. The arches are Hindu in form, Mohammedan in application and rests on columns that are Western. This architecture sets a fashion copied in secular buildings for another two centuries to follow.

The great Nayak rulers, Visvanātha, Krishnappa and Veerappa provided the right atmosphere for the artists to work. However it was Krishnappa (1564—1572) who was a great temple builder who was responsible for the construction of the thousand pillared hall and may other works at Meenakshi temple. The thousand pillared hall at Madurai became the experimental centre for the sculptors who had sought refuge at Madurai Court.

The thousand pillared mantap is a hypostyle hall occupying a space of 240 by 250 feet. Aryanātha Mudaliar seemed to have helped the monarch in this great venture. Scholars have identified the equestrian figure at the entrance of the mantap as his portrait sculpture. But actually it is Siva who appeared in the story of conversion of horses into foxes and *vice-versa*, one of the 64 leelas of Lord Sundareswara. It is said that Siva himself appeared in the Pandya Court as an Arab trader bringing with him Arab studs ordered by Manikavāsaga, a minister. The presence of fox in the base of the sculpture provides the key for a re-identification.

The Sculptures, served in these halls a distinct function similar to *Goshta* figures in regular temples. By the 13th century, philosophy had crystallised and temples were shaped to symbolise *tattvas* the eternal verities. Saivism had evolved three principles for the soul to be rid of, *mala* (impurities) : *Ānma tattva* (body principle), *Vidya tattva* (mental principle) and *Siva tattva* (spiritual principle). Bigger temples like Madurai Tiruvanaikka, and Tiruvannamalai had in them three mantaps or shrines for Nataraja arranged in the path leading to the sanctum. Incidentally it may he noted that all these mantaps came to be built during the Nayak, period. The thousand pillared mantap encountered first, represented the *Ānma tattva* or the body principle. The thousand pillared mantap had five tiers, each representing the five sets of eternal verities. Five *Gnanēndriyas*, organs of sense perception : five *kanmendriyas*, organs of action, five *tanmatras* which are archetypes or subtle rudiments of elementary matter, the five elements being resolved into rudimentary elements of the five senses, as earth into that all smell etc., five Butas (elements) and four *anthakarana* or intellectual faculties which included *manas* (Mind) *buddhi* (reason) *ahankara* (power) and *Chitta* (resolution). The hundred pillared hall next symbolised the mental principle which included *kāla* (time) *Niyathi* (fate), *kala* (science) *Vidya* (arts), *rāga* (desire) *purusha* (soul) and *māya* (*matter*) Finally the sixteen pillared mantap near Siva's sanctum represented *Siva Tattva*, the spiritual principle,

The sculptures instead of being installed around the *Goshta*, canons for which had already been strictly settled , and

followed for ages, are now placed in front of the shrines in rows.

The function of Pudumantap however is different. In front of Siva's shrines which are located in the centre of a city, a tank is to be built or a shrine for a *soumya* (placid) murthy is to be constructed. Exquisite town planning of Madurai, forbid the construction of another shrine opposite to the sanctum of Siva, and ingeniously the Pudu mantap, which really is a central mantap with water chute all around was conceived by Tirumalai Naick. It served as a tank and a as portrait gallery of a new line of kings, the Naicks who kept up the glorious tradition of sculptural art alive and continuing.

The Sculptures in the thousand pillared hall, by style could be classified into three distinctive types: (a) Western in style (b) mixed Western and Eastern & (c) Purely Eastern.

(*a*) *Western Influence*:

The figures of Arjuna, the Princess, Kurathi, Kurava and outer facade and Virali, Kali Purusha in the inner aisle of the thousand pillared hall are fine examples of western influence. For the first time in the South Indian sculptural history figures began to be carved with such anatomically accurate description of the body structure in its envelope of muscles and skin. The sculptures abound in surface realism. The problem of muscular articulation, balance and proportion necessary to confer dignity and beauty have been tackled and a file of sculptures with a new look came into existence.

The torso and particularly, the assemblage of the muscles, movement, balance, the rhythm are several aspects to be observed. The veins and bones are delicately carved and the stone has been magically transmuted into a human figure of bones, and fleshy envelope, in other words translating what all the eye sees. Is it just that? No. The sculptors had a nobler objective than mere imitation of form. Through the rigidity of the form they have conveyed what the soul alone can perceive, namely the emotion. This is one of the uniqueness of European art to imitate form in order to imitate the emotion contained in it.

The Sculptors who had carved these figures had tried to recover in stone not only the material body but also so much of the feeling as the body can for the moment express. The neo-Sculptor here imitates the psychical selves that come out in the eyes, the face, the feature, the pose during great moments or critical action.

As an illustration let us consider the two figures, hitherto known as Saraswathi and Nāgarāja and which have been recently identified by me as Virali and Bana respectively, figuring in the Musical contest-one of the 64 leelas of Lord Sundareswara. Virali and Bāna are wandering minstrels with a continued literary tradition in classical Tamil works till the 16th century.

The story of the contest must be known in order to fully appreciate the effort of the Sculptor in catching the great moment and expressing it vividly in his sculpture. Madurai temple had on its staff a Virali noted for her talents in Veena. She was unsurpassed. Daily seated before the sanctum, she played on the Veena soul stirring devotional songs. Often she used to go in a trance. One day the queen visited the temple and the Virali was so much absorbed in her music that she failed to notice the royal presence. The queen felt insulted and to wreak vengeance arranged through her Lord, the Pandya a musical contest. A Virali from another country of inferior talents was chosen and at the end of the contest the visiting Virali was given the winning place by the prejudiced Pandya. The Madurai Virali had no other go but to appeal to the king for arranging another contest. Another one was arranged and Sundareswara the presiding deity of the temple was physically present as a Bāna amongst the crowd and declared to the annoyance the king, that of the two, the Madurai Virali was the best.

The two figures of Virali and Bana an sculpted to bring out their feelings at the critical moment of victory.

The Virali in her attempt to win over the injustice done her by the erring Pandya strains herself to the utmost to play her part well and this effort is reflected in the torso, stomachfolds, muscles, the veins in the legs and hands. In the Bāna figure, there is peace *sans*-tension. It is the Lord himself that is present

to set right an error. The Bāna's face reflect the quality of conscious intelligence that was necessary to stun the Pandya and make him alter his verdict.

The figure of Kurava and Kurathi in the outer facade of the thousand pillared mantap, are realistic and are intended to bring out a different feeling. Both are typical of the Western influence for the stone has been metamorphosed into muscles and taut flesh. The carving of the ribs speaks of the technical competence reached by the neo-sculptors. The bicepe of the legs and muscles in the torso of the figure are almost literal imitations of the human model. The vitality of the nomadic Kurava and Kurathi has been brought out with great skill.

The figure of the hunter at the entrance of the thousand pillared hall portrays the victorious hunter returning in a gay mood. The hunter is a royal personage known from the steed at the bottom of the sculpture. The antelope the fruit of the hunt, is carried with ease on his shoulder by an attendant. The anklets are carved. Besides these figures the others in the facade of the mantap with the exception of the equestrian figure and *Bikshādana*, are proto-types of the western inspiration.

The beard of Kannappa, his foot-wear are notable innovations. The sculpture of Samhāra by its side also abound in detailed imitation of the human figure. True to life they express all the delights, pathos and moods of the victor at moments of great sacrifice and victory.

The sculpture of Kannappa merits attention for other features than those mentioned before. The figure wears leather sandals, a proto-type of the ancient Greek and Roman models. The placement of linga, the eye of which he replaces with his own, is at his foot occupying a secondary place; perhaps serving as a key for proper identification of the figure as Kannappa. The entire portrait with linga, constitutes an intact design vividly executed. There is a departure from the convention by giving the linga a subordinate place.

(*b*) *Mixed Western and Eastern*:

The figures, Rati on a swan and Subramanya on a peacock are examples of a clever integration of Eastern and Western tech-

nical features. Actuated by a desire for perfection in proportion, the artist has selected a posture wherein he achieves a wonderful balance in weight and tension and a suggestion of lithe activation. incidentaly the addition of stirrups in the figures is interesting. The experiment, however has not resulted in improving the quality of Art. Instead the blend has ruined the uniqueness of both the Western and Indian styles. The sculptures of Tiripurāntaka and the Kankala in the facade of the mantap are all of the mixed type. Here the divine personality or universalised quality of the Gods are unseen. Instead only heroes and athletes, prototypes of the Olympian gods of Phidas are noticed. The Indian sculptors of the early and medieval period traditionally portayed gods as cosmic beings, repositories of spirtual power, spiritual idea and action. Their aim was to make the human form assume utmost spiritual beauty, but the Gods sculpted here seem to be mere unsuccessful attempts at integrating spiritual content in an idealised anthropomorphic form. There was no great moment of critical action to the expressed in these figures, hence they turned out to be unsuccessful.

(c) *Purely Eastern* :

The figures of Ganesa, Dvārapālas are purely Eastern approaches, so too the equestrain figure of Chokka Rāvuthar and Bāna. All the portrait sculptures both in the thousand pillared hall and Pudumandapam are carved according to conventions laid down in traditions.

In the portrait sculptures of Manu-Needhichola, at the thousand-pillared mantap, there is no dominance of the anthropomorphic form. Manu Needhi is a great mythological king of Tamil Nadu who ran a chariot over his son to uphold justice. This figure was hitherto identified as Arimarthana Pāndya—by the earliest discoverer of the temple, but the presence of a cow in relief, by the side of the portrait figure helps us in re-identifying the sculpture as that of *Manu-Needhi*. The character, and the spirit that enlivened the great monarch to uphold the scale of justice, are well brought out in stone. The absence of bony structure and its enveloping muscles is found not only in this figure, but also in all the portrait figures at Pudumandapam ranging from Visvanātha Nāyak to Tirumalai. This is in

keeping with the injunctions in *Sukraneethi* (Ch. 4. Sec. 4 verse 76) which states: "It is of benefit for men to have the image of a god (*déva bimba*) even if it is not made with proper lakshana but with secular (*martya bimba*) with all characteristics ss not beneficial".

This new technique namely the blending of the techniques of the East and the West is attempted at Pudumandapam in the case of Gods and Goddesses installed around the corridors. The pillar-sculptures carrying the divine forms present themselves with a new dynamism. Already attempts to bring out the soulful spiritual content are made but, too great a success in this is not noticed. However the traditions of the South Indian sculptural art seemed to weigh much with the artists in the next phase of the Naick art which is witnessed in the unfinished tower opposite the Pudumandapam. It is here that the Pāndyan art flowered and reached new dimensions, revitalised by the new technique usefully learnt and experimented, Here art traditions seem to have been re-studied-, re-absorbed-, re-visualised, and uniquely presented. But unfortunately the Naicks were affected by the vicissitudes of fortune and, bereft of royal patronage, sculptural art disappeared to the background.

The novelty and the quality of the work accomplished in the thousand-pillared mantap had inspired the later artists who sculped the figures at Pudumantapam. The new approach, however novel and enchanting it may have been, did not seem to be the "permanent law ot artistic creation". So long as the balance of the outward physical harmony of nobility and grace and the rhythm of profound spiritual suggestion was maintained, the greatness of these art work continued. But this could not be done for a long time, for in the later Naick art witnessed at Pndumandapam and at a variety, of; places like Alagar Temple, Krishnan Koil, Nānguneri, Perur the striking physical grace, powerfully expressed did have the suggestion of the spirit. But the fiction of exaggerated realism of the form, failed soon to yield the secret of the spirit in life and matter. The sculptures were indeed fascinating as their European counterparts but what they failed to express was considerable and the spiritual experience was lacking. And this is exactly the limitations of the Naick art. The uniqueness of the early and medieval Pāndyan and Chola

icons—be they stone sculptures or bronzes-are not seen in these pieces, so too the soul in the body, the cosmic individualised in suggestion, but not lost in individuality. So long as the artists were fired with genuine spiritual inspiration obtained by the constant vision that lingered in their inner eye. their productions continued to be soulful. To them what all they did, was a dedication to the Gods.

Thiru R. Krishna Rao: It has interested me to be fully associated with this Seminar. I am happy to note that your esteemed Institute of Traditional Cultures, University of Madras has been conducting appreciative survey of traditionsl culture in Southern region. You must now help the region from the devastating tendency of the temple authorities in renovating the frescos by the third-rate bazaar taste brush. I was almost drowned with pain too see the frescos on the ceiling in Devi Temple in Natarāja Temple Chidambaram. The centre theatre is completely massacred and paintings of procession of Gods and Goddesses are painted with latest cine stars as models. Such a disgraceful vandalism will never be approved at any place under the sun in the whole of the world excepting our ignorant place. Fortunately the frescos on the side hall of this theatre on the ceilings dating back to about 200 years are left yet. The paintings are marvellous age-old reminiscent of our ancient culture. Can you not help by telling the public and the Government to take utmost care of this most valuable heritage about which we can be very proud.

Thiru N. Murugesa Mudaliar

Mr. Jeyachandrun's subject is welcome as it is out of the way and it refers to recent influences on our traditional art. It is a fact that Indian art particularly in architecture has been influenced by Western influences. As regards temple sculpture—icons & bronzes—it is difficult to isolate the influence and state specifically which were the iufluences. It is however a fact that the temple sculptures, friezes, icons etc., in the Nayak period though basically traditional, had adopted some new trends.

Mr. Jeyachandrun referred to the Portuguese influence by the migration of Indian artists from Goa to as far as Madurai but be

confined his observations to the Madurai sculptures and has not indicated the new trends. He referred of course to the physical dynamism of the new sculpture which some critics call as 'stiff'. It is true that the phase from traditional art to expressionism of to-day even in sculpture, has passed through an artificial phase. Probably if Mr. Jeyachandrun makes a comparative study of the scupltures of this period, of Madura, Kumbakonam, Perur, Krishnapuram etc, he might be able to identify the trends, viz, whether it is physical dynamism or anthropomorphic realism or stylisation on the basis of realistic art. For example the provision of a stirrup to God Muruga riading on the peacock in a sculpture in Pudumantapam is an abomination. No traditional sculptor will ever show Muruga astride on the peacock's back and least of all show him with stirrups. It has therefore to be studied whether the new trends were physical dynamism, innovationism or stylism based on Western art and whether they add to the quality of art at all, no matter whether it is traditional or modern. Sculptures for traditional worship should conform to Silpa sāstras. but taking a progressive view, there is no harm if external sculptures bear the creative genius of the Modern Indian sculptor but it must be genuine and possess quality and excellence and not be mere crudities passing off as modern.

Dr. R. Champakalakshmi, raised the following points :—

(1) Why is it necessary to look (always) for influences from the West In Indian Art in general and certain aspects of South Indian Art (e.g. Nāyak period) fn particular, when greater attention to details and especially anatomical ones is given in that art ?

(2) Would it be correct to use terms such as *'Baroque'* and *'Rococo'* to describe art remains of the Hoysala and Vijayanagar periods as they exhibit a strong tendency for ornamentation, in other words because they are ornate and over ornamented ? and

(3) Could the sculpture of a particular period and region be studied in isolation (to the other periods and parts of India) in order to prove such influences in the development of aesthetics and technique.

Dr. N. Sanjivi: Not only me but many friends know that our friend and scholar Thiru A. V. Jeyachandrun is endowed with versatile knowledge. I am deeply grateful to the Institute of Traditional Cultures for affording an opportunity now for many to appreciate this fact.

Thiru Jeyachandrun in his Research paper has clearly and lucidly brought out the fundamental traits of South Indian sculpture in a pleasant manner. But if he had only more clearly than now, indicated the title of his paper, it would have obviated expectations and disoppointments. The title having given rise to great expectations his plea that his research is limited in scope, actually does create disappointment.

Thiru Jeyachandrun's paper clearly shows the breadth, depth and clarity and speciality of his knowledge of the sculptural Art. How far Westerners will accept the purpose and manner the East-West traditions in sculpture as brought out by him is a matter to be considered. But what he has stated is a pleasant surprise to us.

Is it not ennobling to blend the emotions of the East and the materialism of the West in sculpture, as well as in all other Arts and in the ways of our life? But even though attempts were made in later periods—during the Nāyak period by our ancestors, why is it that Thiru Jeyachandrun and people of his type do not derive mental satisfaction from it. Is it due to want of efforts or are there other causes? This is a point for consideration. The mere spelling out of success or failure in these attempts will not by itself make for development. The investigation into the reasons for these two is necessary for a new life.

The author of the paper refers to the influence and attack of Western tradition, existing in sculptures of districts, other than the Southern districts, even before the time of the Nāyaks. It is natural therefore to expect some explanation for this from him. But in this we suffer disappointment.

It would appear that there are weighty considerations, weightier than what the leader of the Seminar thinks, for the

reference to the Forest hunter Kannappar being described with the adjective "கலை மலிந்த" (Man of many parts). It may specially refer to links with previous births. The new explanations given the respect of some old sculptures of the Madurai temple by the Leader, clearly display his keen intellect and his knowledge of literature on the subject.

His two references to Agamas serve as a good reminder to us. Our arts will develop keeping pace with the quickness with which we translate into Tamil, the Agamas and other like Sanskrit works. But in our country—Sanskritists and Professors plead for the learning of that language for this purpose and do not appear to realise that the geeatest honour that can be done to that language is to cater the translation of the ideas in that language to other languages. They worship the form but do not have the heart to worship the ideas.

When we hear the Research papers of Thiru Jeyachandrun we are provoked to think, whether it is not necessary to spread throughout cities and villages the noble ideas about our own country's sculptural heritage. For this to fructify into realisation, our History Professors should greatly help. Tamil teachers in order to help the growth of Tamil, conduct a lot of classes in Tamil and deliver lectures and thus serve Tamil. How many among the History teachers who cavil at the Tamil teachers equivalence to B.Ts, (teachers who hold the degree of Bachelor of Teachers) serve, either individually or publicly or honorarily for the cause of history knowledge? The History teachers in each town should inculcate in all children in primary and secondary schools, knowledge of all sculptural treasures in their towns. Collegiate education in history will became fragrant with such historical knowledge. May all history teachers come forward to undertake this work if only in their own interests?

We may feel proud about the new ventures of the Tamil Nadu Charitable Endowments Department. One matter for their serious consideration before spending money for public is, whether they should not publicise the history of endowments relating to the temples and hava a photographic display of all the glories of sculptural arts, seeing which, people can feel that they are

seeing the original sculptures. This will enable the formation of deep impressions in the mind, of the glories of Tamil art. The benefit of this could be reaped by politicians and economists also. Moreover the exhibition of the educative sculptural pictures, on a large scale, at least once a week, in educational institutions, offices and other desirable places will wean away the public minds from being influenced by bad pictures. Changing ignorance to knowledge is not possible without changing the feeder channels of education.

Thiru V. Ramasubramaniam (Aundy): No culture in the world had continued to remain static in its pristine selfborn crudity. And Sculptural Art is no exception. Right from the prehistoric days of the so-called Indus Valley civilization, India had been receiving impacts from Western Asia and perhaps from Egyptian and Minoan (Crētan) cultures too. It goes without saying that there were mutual give and take. Both the regions developed, however, distinct but integrated systems of art. The Indus and Sumerian seals and artefacts reveal many common features in their techniques, which could not have occurred without integration. The much-discussed bronze 'dancing girl', the mutiliated body of a 'dance-master' and the bearded torso in white sandstone of a shawl-clothed 'priest', are specimens handed down to us as our national heritages from our pre-historic past. And again, the seals show more advanced techniques of group scenes in bas-relief instead of the above-mentioned 'one man' statuettes. The seated 'Yogin' surrounded by various species of animals, reveal, however, a stylized standardīzed conventional technique rather than a knowledge of perspective.

When, on the other hand, we compare these specimens with the later Hittite and Assyrian "lion-hunt scenes", unearthed in Karatepe and Nineveh respectively in Asia Minor we notice a distinct improvement towards perspective Art in the West. The contemporary Egyptian pyramid sculpture and paintings also lead us to conclude that the West was earlier in evolving Realistic art. The paintings on the Greek and the Cretan vases and bowls definitely indicate a distinct advance on the Assyrian even though all the above-said improvements happen to fall short of the vigorous animated and realistic colour cave-paintings of the hunting scenes of the so-called Neanderthal and other cave-

men of the Europe of the 20th century B.C. We can even hazard a guess that all pictorial art must have begun first in realistic group-themes, but had degenerated into more sophisticated single figure" close ups" and decorative embellishments.

This last conjecture gains strength from the occurrence of hundreds of the most famous Venuses, Cupids, Apollos and other individual gods and heroes of classical Greece and Rome with practically no specimen of groups in sculpture, even though we find them in abundance in the contemporary paintings on vases and other artifacts. In the Persian art of the Achaemenian epoch too we find many a group-scene in bas-relief on rocks and monuments, but, subsiding into the degenerated Hatra art of the 2nd century B.C. (*circa*).

All these Western tendencies culminated at last in the direct physical impact on Indian art when Alexander invaded India. Unfortunately we have not many specimens of sculpture hailing from the pre-Alexandrian epoch, except "perhaps" the super-sized statue of Ajātasatru of the Sisunaga dynasty and a few other Parkham examples. Even these are but *tentatively* placed in that earlier epoch, since evidences occur only in literature and religious canons and not in epigraphs. "Now, we may ask", queries Prof. K. A. Nilakanta Sāstri elsewhere in another context, "whether any statement gains in trust-worthiness merely because it is engraved in copper or stone and not written on palm-leaf."

It was after the Baktrian invasion of India in the 2nd century B.C. that we notice irrefutable proofs of direct influence of Greek techniques on the sculptural art of India. Enough has been said and written on the so-called '*Gāndaran Art*' of India by numberless savants and it needs no reiteration here. But it demands notice on one point, however—viz. the occurrence of 'group scenes' with many super-human, human and sub-human characters in poses anatomisally perfect as well as varied, but still *stylized* and *symbolized* in technique as in the Barhut, Sānchi and Amarāvathi stupas.

It is only when we come to survey the Pallava sculptures of the early middle Ages—(from the 7th to the 10th century A.D.)

we discover pleasantly perfect specimens of naturalistic scenes of lively animated groups—as for example in the famous Mahishasura-mardani panels, the Ananta Sayana bas-reliefs, the Govardhana and Trivikrama rock-cuts, and the world-famous 'descent of the Ganges' mega-panel of Mahābalipuram. Similar scenes of lively beauty occur in the Kailāsanatha and Vaikunta Perumāl temples of Kānchipuram also, bristling by interspersed with more mundane themes too. It is therefore, a notional conjecture that the Indian sculptor has naturally improved on his skill in depicting Puranic and historic scenes naturalistically, not forgetting perspective as well as anatomy, besides facial expression, even though his medium was the roughest sandstone.

When, however, we pass on to the later Chola epoch we notice that all the energies of the sculptors had been spent on the production of better and more attractive human and animals individuals, gods, men and demi-gods. Nevertheless, these artists did not fail to depict group scenes of hundreds of dance-poses (*karanas*) with appropriate musical accompaniments in several south Indian temples, reminding us thereby that they were not less skilfull in that line of art too! But the Chola bronzes are unique specimens, wherein human anatomy has been blended with almost feminine grace. This feature was a distinct improvement from Western techniques, where sensuous anatomy overwhelmed grace. There are even now a few critics who find fault with this aspect of Indian aesthetics, which demanded such great warriors and archers as Rāma, Arjunā, Krishna Lakshmana, Karna and Skanda to be moulded as almost effeminate!

Coming next to the Vijayanagar and the Nāyak epochs of South Indian History, when European encroachments, upon Indian freedom and culture had already taken firm roots in the Indian soil, we are able to discover the strong influence of the Italian Renaissance Art on South Indian Sculpture. North India, being under Muslim Rule, seems to have escaped the phenomenon as carving of human figures was anathema to the Ruling powers. But in South India, temple-building and sculpture grew with redoubled enthusiasm and force for various reasons, and we find hundreds and thousands of anatomically perfect and sensuous carvings of human, divine and sub-human

characters. Almost all of these are close-ups of individuals profusely decorated, and many of them excelling in beauty and charm even over their Western Italian models. The dexterous decorative details attained perfection the Chālukyan art of the Karnātaka areas, where the fine-grained granite lent itself to such polish and workmanship. The Tamilian artist, on the other, hand, delighted in exhibiting his skill by connecting two standing 20 feet columns with stone-chains, all carved out of a single granite block. He carved out musical composite pillars too with 20 to 25 multi-tonal minor-columns scooped within a single column.

We discern, however, a decadence in the technique of group-scenes. The few that we have are also static in movement, and not dynamic. There are a number of specimens of kings, queens, ministers and rich patrons of art in groups, but, perspective is *consciously ignored.* We see queens, princes, ministers and other attendants standing by the side of their Royal Masters in the same plane, but of *height not even half of those of their chiefs*! There are many such bas-reliefs and even 3-dimensional carvings at Suchindram, Trivandrum, Krishnapuram, Madurai and Kumbakonam temples. Realistic groups, which were characteristic of the Pallava sculpture, seem to have given place to close-ups of sensuous flesh and muscle.

The leader of today's seminar, being himself in charge of the Madurai temple, is doing yeoman service to South Indian art by drawing scholarly attention to the various phases and vicissitudes of the art that has come down to us as our priceless heritage. He deserves our hearty thanks. Dr. K. K. Pillay too, who is himself an authority on Suchindram temple art and architecture, has done the right thing at the right moment by inviting him to lead this seminar.

Concluding Thiru. A. V. Jeyachandran tn his remarks stated :

Quite contrary to my expectation I was indeed delighted to see a vivid interest in the paper read by me. I must thank Dr. Champakalakshmi, Mrs. Sivamani Nāthan, Thiru N. Murugésa Mudaliar, Thiru V. Rāmasubramaniam, Thiru D. Natarājan and Thiru Janārdhanan for the discussion. I will take up first the points raised by Dr. Champakalakshmi.

"The first question takes up to the very fundamentals of the traditional Indian Sculptural Art. Great attention to anatomical details, was never considered, as in the West, a dominant factor in the sculptural art of South India. It only served as an hand maid to reflect the spirit within of the sculptures. The *Silpa sastras* laid down clearly, the details of the form, not the details of the physical body with its bones, muscles, veins etc. leaving the artists to conceive of the real content of the piece he was producing through the constant repetition of the Dhyāna sloka. That is exactly why though the figures produced tally in form with the canons of the Silpa texts, differ in their appeal depending on a spiritual development and the expanded consciousness of the sculptor. So when one comes across for the first time sculptures, so strikingly different to the traditions of the South, with insistence in surface realism one has to seek for the reasons for the change.

In dealing with the second important question of Dr. Champakalakshmi, it becomes necessary to have a peep into the new spirit of the Vijayanagar period. The Vijayanagar emperors had to their credit outstanding achievements in many fields and they vied with each other in patronising all forms of learning and Arts. They sought to bring fresh approaches in all fields. Sayana wrote his commentaries on the Vedas, the court of Krishna devarāya was flooded with poets, men of learning and artists.

In fact universally there was a great revival in learning and art between the 14th to 16th centuries. The artists tried to express the great sensibility of the time and a new movement in art came into being. And it is not surprising that this new upsurge in Art during this period also animated the artists of the Vijayanagar period. The new vitality injected into the prodigious productions of the Vijayanagar period will have to be viewed in this context.

If by Baroque, Dr. Champakalakshmi means the Baroque spirit, the freedom of plastic expression and by Rococo, she means the new style of interior decoration and ornamentation, she is quite right. However here also the ornate presentation except in a few very instances remained truely Indian. That was an age of curiosity when artists were for presenting of almost

realistic shapes. They ornamented them in an effort to accentuate the beauty of the figures. It cannot be stated to be a decadence in art, for the genuine artist was always out to work on newer materials with novel methods.

It is a way of presentation and just that. However this tendency for carving ornate figures has not stayed long in the minds of the artists of the age and the figures of the slightly later periods have not shown to have had the ornate style. True there has been decadence in the sculptural art. Sculptural art thrived only under patronage and till another regal patron comes into the picture the art has a fall to rise again and to evolve. Great temples were not built after the 18th century and renovations by Nagarathars in Tamil Nadu, during the 19th and 20th never gave importance to sculptural art except possibly in the solitary case of Kambathadi mantap at Madurai, where the sculptural art is seen at its ends.

Whenever a novel idea is experimented upon it is done in a limited way only in a particular area and when once that experiment proves a redounding success, the inherent merit of the production itself serves to spread the message and influences the artists of other areas. The Hoysala Art seen around the Kannada area has not spread at all for it turned out to be a decadent Art. So any influence starts in an area and when once it carves itself a niche in the hearts of the artists, it spreads.

It is excedingly nice of Thiru N. Murugésa Mudaliār to have participated in the seminar. For a study of the Nayak Art in its finest phases, Madurai, perhaps is the best place. The surface realism and dynamism exhibited in the sculptures are strikingly so different that it merited a new look. The interpretation the sculptors aimed at in these Madurai pillar-sculptures was different from those of the traditional Indian sculptors.

I am also thankful to Dr. Sanjivi in participating in the seminar and adding lustre to it by his thought-provoking remarks. After all in a study like this, one has to limit himself, at first to an area which is typical for such a study and draw tentative conclusions, and then apply such conclusions to other areas also. In this instance, as I have already pointed out at the time of

inquisition at Goa which resulted in the largescale exodus of Indian artisans trained in Western sculptural and Architectural techniques, it was only the Nayak Court that provided them shelter as it is well known, great work of Art flower oniy under regal patronage and it did under the Nayaks of Madurai during the late 16th and early 17th centuries. It is these basic facts which I wanted to stress.

It is not as if that the Eastern sculptors were not aware of the Western scale in sculptural art. The Western adopted a nine scale for distorting the human frame to achieve beauty, but the Estern technique provide a much greater beauty by adopting a ten-acale. In terms of aestheticts, the Eastern variable and fixed scale evolved, is a tried and superior scale to those of the West. Hence during the earlier period under the Vijayanagar kings when one discerned Baroque influence ornamentation of figures one could see that there was no variance in scale. But in the case of sculptures of the Thousand-pillared even in the scale there is a difference—the Western scale has been followed So there is a stepping down and not an upliftment as Dr, Sanjivi imagines.

Because the sculptures were in the Western idiom, it attracted the attention of art historians like Ferguesson and Berguess who were conversant with it and hence appealed to them even in the first instance, making them wax eloquent on those pieces till they were reminded of the uniqueness of Indian production by scholars like Dr. Kumāraswamy.

This study is not a full-time work and is more a labour of love and I have undertaken it with the aim to provoke persons with greater leisure to make a full-time study of this influence.

Always Thiru Rāmasubramanian (Āundy) has a way of adding scholarship to any seminar held under the aegis of the Institute. As usual he has widened to scope by adding valuable material carefully collected and scholarly presented.

Art interprets three things in the object it selects, (i) the object itself, (ii) the psychical part of the object, its emotions etc and (iii) the physical part, or the surface realism as one sees.

The Indian Art confines itself to first two, and the Western Art to the later two. In Indian Art as has already been explained the Artist sees the thing itself by a subtle eye or Dhyana and the truth expressed in the object dawns in the mind of the Artist as a revelation. This he transfers to the stone. Western Art, on the other hand makes much of the physical form, with the result the artist has not the spiritual or plastic freedom of his Indian counterpart to express the psychic truth in all fullness as comprehended by him. The uniqueness of the sculptural Art of the Nayak period, particularly in the thousand-pillared mantap is in depicting the ffgures in action or dynamic situations, so that great deal of psychical forces come out in almost in every limb, eyes, ears and in fact in every part of the entire body. The figures are not mere imitation of human form but imitation of feeling. This could be done only by those trained in the best of traditions in higher European Art. As I have already points this new technique has enlivened our sculptural art in its own way to a great extent, but unfortunately before its flowerings could be witnessed the royal patrons have disappeared, The Nayak art, hence has been an incomplete saga.

The Chairman thanked the Leader and the participants in the seminar, for their high-level contribution to the discussion.

BOOK REVIEWS

BIBLIOGRAPHY OF THE FRENCH IN INDIA—compiled by HENRY SCHOLBERG AND EMMANUEL DIVIEN—Published by the Historical Society of Pondicherry, India. Rs. 55/– (Pages i—lxiv, 174 and index 42 pages)

"Bibliographie Des Francais Dans L'Inde" is an Indian Bibliography of French writing in India, which is limited in its scope as the compilers Henry Scholberg the scholar and Emmanuel Division, Madras University scholar, are careful to point out. It is not a general Bibliography of the work of the French in India—that would have been a voluminuous work. It is a Bibliography of the work published in India mostly in Pondicherry by European and Indian writers, travellers, missionaries and merchants. And as such it is a volume of portable size. It shows that Frenchmen who were denied political empire in India largely on account of lack of support from the Governments in France, of statesmen like Dupleix whose ideas on the expansion of French rule in India were adopted and organized successfully by the English, decided to devote themselves to the study of the people, their history their laws and customs especially in southern India and more especially of the Tamil country. Concentration of this work in one place allowed scholars, Frenchmen and Indians to have their own library, printing press to publish their work to the lasting glory of the French in India. Students of French history in India and of the people and their social, economic life would be especially grateful to the compilers. It would be a useful addition to historical libraries in India.

M. Ruthnaswamy.

BIBLIOGRAPHY OF BOOKS

[NOTE: Titles of Books and perriodicals are in italics. The books are listed in the alphabetical order of author's names first and then articles arranged in alphabetical order of subjects.

Abbreviations :

ABORI—Annals of the Bhandārkar Oriental Research Institute.

BRMIC—Bulletin of the Rāmakrishna Mission Institute of Culture.

BSOAS — Bulletin of the Institute of Oriental and African Studies.

E & W —East and West.
I A C —Indo Asian Culture.

ARCHEOLOGY

INDIA

Sankalia, H.D.; *Dwāraka in Literature* and *Archeology*; (*Sāradāpitha—Pradipa*, Vol. XI No.2, Aug. 1971, pp. 14 to 30).

The author who has specialised in Archaeological investigations is discussing the location of Dwāraka, where Lord Krishṇa lived. It is assumed that the place was twice submerged into the sea and that the present one is the third Dwāraka in Gujarat. He discusses here the views of Altekar, Bhattasali, Karmalkar, Dr. Kosambi, Pusalkar and others regarding the ancient site. Mūla-Dwāraka where Lord Krishṇa is said to have lived and about

which the Mahābhārata gives details in the Musala Parva must be near the present side of Dwāraka buried under 20 feet of sand. The author has discussed this, at length in his book *Excavations* at *Dvaraka.*

ART

GENERAL:

Hayman d'Arcy: *New Unesco Book: Art Education—An International Survey: (Unesco, Features):*

What is the rule of art in the general education of all people? How does art contribute to the development of the human personality? In the light of rapidly changing social structures and technological advances, how is the professional artist formed, and what educational programmes are offered to him to meet his needs and responsibilities as a contributing member of society? What programmes in art education are needed in such young institutions as cultural centres and youth places, in order to offer the general public an opportunity to better know, understand and appreciate the artist and his work?

These and other allied questions are viewed against different cultural backgrounds throughout the world.

ART

INDIA

Banerjea Arany: *Contemporary Art in Social Perspective.* (*BRAMIC*, September 1972, pp. 338—342):

Substance of a lecture on the subject at the Rāmakrishna Institute of Culture Calcutta; gives reasons why the majority of Indian artists have turned to the West in their search for an articulate form; argues that art must be a native growth and concludes "Some artists, in their desire to take the world by storm, want to offer something different, to shock their way into the limelight. The need not be taken into account. They will vanish from the scene as suddenly as they appeared. There are others, however, and their number is considerable, who sincerely want to experiment. They are fascinated with new forms and intoxicated with new techniques, and their search for new horizons is genuine.

Unfortunately, these artists are alienated from society because the art forms with which they wish to experiment are themselves alien to them. They are in an unfamiliar language".

CULTURE

GENERAL

Toynbee Arnold: *Surviving the Future* (Oxford University Press, London, 1971 pp.164, £ 2.00 Rev: in *BRMIC*, pp. 310—313).

Science and Technology have enabled man to establish control over the forces of Nature; but it has not helped him to "break out of the prison of his inborn self-centredness into communion or union with some reality that is greater, more important, more valuable and more lasting than the individual himself." Man is a spiritual being and the hope of humanity in redeeming itself from its present appalling situation lies in religion and the rule of the youth in playing its part.

Lanczkowski, Gunter: *Encounter and change of the Religions*: ("Begegnung and Wandel der Religionen") Dusseldorf: Verlag Eugen Diederichs, 1971; 196 pp, *REV.* in *Mundus*, Vol, VIII, No.2, 1972.)

The Heidelberg theological historian presents an important work on current problems of the religious situation in the world. The author surveys the great fields of knowledge of the phenomenology of religion and the history of religion and through his delibration on the basic forms of the change in the religions he is able to illuminate and to clarify the mutiple problems of the situation of religions in the world.

ASIA

Chandra, Lokesh; *Indian Culture in Translaikalian Siberia*; (India's contribution to World Thought and Culture, *Vivekananda Commemoration Volume*, 1970, pp. 629 to 632),

Buryat tribes occupy the regions abutting lake Baikal in Siberia. Though once pre-eminently Shamanists, the tribes came to feel the impact of Buddhism in their aspects of life. Indra and Agni became parts of their daily worship. By about 1660 A.D, they

first experienced the influx of the Mongolian refugees, adhering to Vajrayāna Buddhism, Monasteries of the Buddhist type were set up with Lamas to run them. Pūjas were performed to Goddess Śrīdevi. The spirit of Nālanda was introduced in the Siberian Universities, where Philosophy, Tantra, Jyotiṣa and Āyurvéda were taught. Ganga water was considered holy. Versions of Rāmāyaṇa in Kalmuk language were written. To Siberia, then, India is the embodied Divine, the "*Cittam, Prakriti—Prabhāsvaram*".

INDIA

Chandra, Dr. Rai Govinda; *Massya or Matsyayugma as symbol*; (IAC, Vol XX No,3, July 1971, pp. 39 to 45).

The Matsya or Matsyayugma (pair) as symbol is very old in India. We find the representation of fish in faience at Harappa and in ivory at Mohenjodaro. Punch-marked coins bearing Matsya are pre-Mauryan in origin. Matsya is an Avatāra of Viṣṇu and is celebrated in the Matsya Purāṇa. In the Mahābhārata period we come across the Matsya country in India. The Jains and Buddhists consider it as auspicious. In ancient Egypt it was worshipped and it was forbidden as food. In China, a pair of fish is considered as an emblem of conjugal happiness and as a charm against the evil eye. Thus we see that respect for fish started even from the stone age.

Crawford, Dr. S. Cromwell; *Eastern values for West*; *A Proposal for Ecologic crisis*; (IAC, Vol. XX No. 3, July 1971, pp. 3 to 9).

The Indian sages made man's relationship towards the land animals, plants, birds and rivers an intrinsic part of their cultural values. The Hindu culture expresses this through its cosmic consciousness. The belief of the Hindus that all emanate from Brahman and are finally absorbed into it recommends Ahimsa to all. Animals and birds associated with divinities as vāhanas and banners are considered sacred. Hence we see that "the Hindu treats the natural world, not as a commodity which man possesses (as the Westerners have construed) but as a community to which he belongs. This ecological consciousness is the outcome of the idea of the oneness of the Universe. This idea should serve as an agent to generate ecological thinking to Western culture".

Gokak Vinayak Krishna: *A system of national education for Modern India* (*Public Affairs*, Gokhale Annual, 1972, pp. 37—38):

While the methodologies and tools of analysis of the West may be used for Indian education, it must be "built on love and Co-operation, a Society which is responsive to the highest cultural need of India". These steps are suggested for the transformation of the Indian educational scene.

Rahman, A.: *Trimurti Science, Technology and Society*: A Collection of Essays: (Foreword by Prof. Joseph Needham; People's Publishing House, Demy 8vo, pp.328, Prise Rs. 30.00).

This volume focuses attention on the problem of historical and social dimensions of science in India and the relevance of science to social and cultural developments.

Rau, Wilhelm Weaving and Plaiting in Vedic India: (The Academy of Science and Literature, Mainz; Proccedings of the Arts and Sociology Class, 1970, No. 11; *REV.* in *MUNDUS* Vol. VIII, No, 2, 1972.)

The author has taken the trouble to collect together all the scattered references in the compendious literature of the Vedas, the Upanishads and Brahmanas about raw materials employed in weaving and plaiting their preparation, the techniques of spinning, weaving and plaiting, and also their names and the use made of the objects (clothing, baskets, mats etc,)

Schlingloff, Dieter: *The Ancient Indian City. A comparative Study*: ("Die Altindische Stadt. Eine vergleichende Untersuchung"; Wiesbaden: Verlag Franz Steiner, 1969, 67 pp. *REV.* in *MUNDUS*, Vol. VIII, No.2, 1972.)

The author's main concern is to correlate the extensive archeological researches of the past decades in the field of ancient Indian town planning and the statements on this subject in the ancient Sanskrit texts.

Goetz, Hermann: *Studies in the History and Art of Kashmir and the Indian Himalaya*: (Schriftenreihe des Sudasien-Instituts

der Universitat Heidelberg, Bd, 4: Wiesbaden: Verlag Otto Harrassowitz, 1969; 197 pp., 49 plates: *REV*: in *MUNDUS* in Vol. VIII, No.2, 1972):

To mark the 70th birthday of Hermann Goetz 16 of his essays from the years 1951—1962 on the art of Northern India, which were published by him in Indian journals in the English language were collected into a *"Festschrift"* and supplemented with a subject-index by Erika Schmitt.

HISTORY

INDIA

Lal Nagar Murari (ed.): *Vikramānkabhyudayam*: A Historical Sanskrit Campu by Śrī Sōmeśvaradeva of Kalyāna; (Gaekwad's Oriental Series, 150, Baroda, Oriental Institute; 1966, XIV, pp. 55; *Rev. E & W*,, New Series, Vol. 20—No.4 (December 1970) p. 489)

The present work contains a genealogy and some interesting details, chiefly concerning Āhavamalla and his son, for whom Vikramāditya was compelled to raise his arms against his two brothers. The work unfortunately is incomplete. Well-edited and useful.

Mukherji, S. G.: *A study of Vaisnavism in Ancient and Medieval Bengal up to the Advent of Caitanya*: (Calcutta, Punthi Pustak, 1966, IX 244 pp.), Rev., *E & W.*, New Series Vol.20—No.4 (December 1970), p.490)

After a short introduction on Vaiṣṇavism in India from the earliest time up to the post-Gupta period, the author undertakes a survey of the Vaiṣṇava records, during the Pāla and Sena periods. The information is collected from literary sources, and specially from epigraphical data,

Prabha, Chandra; A *study of the Sāluvābhyudaya Mahākavya*, *(Sanskrit, Journal of the Department of Sanskrit of the University of Delhi*, Vol 1, pp. 49—57).

The work is a *Mahākāvya* in 13 cantos of moderate length, in verse, recording details about Sāluva Narasimha as the first king of the dynasty. The poem seems to have been composed in

1430 A.D. This study is based on the only manuscript in the possession of the Government Oriental Manuscript Library. According to this work, the Sāluva kings trace their origin from Yadu and hence the dynasty is called Yaduvaṃśa. It is a heroic poem, throwing much light upon the history of the Sāluva dynasty of Vijayanagar. A cursory perusal of the book reveals the poet's mastery of all the ancient Sanskrit lore of India.

THAILAND

Schmidt, Kurto Otto; *Thailand (Siam) with a Guide To the City of Bangkok*, (Mai's World Guide No.1); (Buchenhain/München; Verlag Volk and Heimat, 5th Edn., 1970, 96 pp. photos, I map; *Rev., Mundus* Vol. VII, No.4, 1971, p.369.)

Among the tourist centres of the World, Thailand also takes the lead. The present guide, a fifth edition, is a useful companion to every visitor to the country. The first part of the book gives the entire the history, past and present of the country, while part two gives practical guidance to travellers, with a descriptive sketch about Bangkok and the most important tourist routes.

INDOLOGY

INDIA

Shastri, Satya Vrat (Ed.); *Journal of the Department of Sanskrit*; (Delhi University, December, 1971, Vol. I No.1, Half yearly publication, pp. 1 to 164. Annual subscription, Rs. 10 Foreign 1. 37 Sh. 10)

This is the first issue of the Journal published by the Sanskrit Department of Delhi University. Its aim is 'to bring out a research journal on Indology to serve as a forum for research for its teachers and research scholars'. The articles in this issue are selections by learned men of the Department. The papers contributed, touch all aspects of Sanskrit literature like poetics, drama, nīti sāstra, philology, history and vedic literature. A good number of papers are in Sanskrit and Hindi (Nos. 10 to 17). Some pages are also devoted to Book reviews and departmental notes, The get up and print are good. The journal deserves encouragement.

LITERATURE

GENERAL

Dey Bishnu: *In the sun and the Rain*: Essays in Aesthetics: (People's Publishing House, Demy 8vo, pp, 262, Price Rs. 25.00):

In this volume are collected twenty-two pieces of essays on various subjects and literary and artistic personalities including one on Jaimini Roy who passed away recently.

INDIA

Dhavalikar, M.K; *Sūtradhāra ABORI*, Vol.LII, pts., I to IV, 1971, pp. 215 to 220).

Early Indian inscriptions record that *Sūtradhāra* was an important artisan and next only to him come the three artisans *Sthapati*, *Sutragrāhin* and *Vardhaki*. The *Śilpa Sāstra* gave him the lowest rank in the hierarchy of artists. He was considered an adept in the art of sculpture and in the erection of particular edifice. In Sanskrit dramas, he plays the key role, as the stage manager. In recent times, the word *Sūtradhāra* is no more heard of either as an artist or as a stage manager.

Jayachandbhai Sandesara Bhogilal (ed.): *Sankhaparabhava-vyayoga*: A historical Sanskrit play by Harihara: (Gaekwad's Oriental Series, 148, Baroda, Oriental Institute, 1965, VIII, 26 pp.; Rev.; *E & W.*, New Series, Vol.20—No.4 (December 1970), p. 489):

A rather interesting play by Harihara, said to be a descendant of Śrīharsa and patronized by the Minister Vastupāla. He lived in the 13th century. It was written by the order of the same Vastupāla and it narrates the battle won by Vastupāla himself over Sankha, the ruler of Lata, when the latter attacked the part of Cambay Stambhatirtha,

Lal, Krishna; *Śavitrī—from Samhitas to Gṛhyasūtras (ABORI* Vol,III, pts. I, to IV, 1971, pp.225 to 229).

Sāvitrī (Gāyatrī) looked upon as a *mantra* in rites concerning intellect, had no such importance in the Rg. Vedic period. During the *Brahmana* period it gained in importance and was used in a

number of ritual contexts as during *Upanayana*, for controlling the breath, for worshipping Āhavanīya fire, during Aghara oblations, at the time of accepting *Madhuparka* and at the *Utsarjana* function. A Brahmachāri must consider his preceptor as the father and Gāyatrī as his mother. In *Srautakarmas* it is widely used. Thus, Gāyatrī gained in popular acceptance and now it is looked upon as the mother of *chandas*. It was enjoined that if one was not initiated into the significance and use of the *mantra* he was to be socially boycotted.

Saraswat, Saraswati Brahaspati, The Lord of *Speech in the Rg Veda*; (Sanskrit, Journal of the Department of Sanskrit, University of Delhi, Vol. 1, No. 1, December 1971, pp. 63 to 66).

Bṛhaspati, the Lord of speech in the Ṛg Veda usually designated as 'Kavim Kavīnām' in the mantras is extolled in about 200 mantras. He is also described as the creator of all prayers, meaning thereby that the Vedic mantras owe their origin to him. He is also designated as *Saptāsya*' the seven mouths representing his outpourings in the form of the seven metres in which the Ṛgs. are composed. Usually he is the patron of the mantras as he is called 'Mantrajihvām'. These aspects serve as the link between the Bṛhaspati of the Ṛg.-Vedic and Bṛhaspati of the post-Vedic literature.

Satya Vrat, Usha; *Sanskrit Dramas of the Twentieth Century*; (Meharchand Lacchmandas, Delhi, 1971, pp. XIII plus 444 Price Rs 65/-; *Rev*; *Sanskrit Journal of the Department of Sanskrit of Delhi University*, Vol.I, No.1, December 1971, pp.149 to 150):

The origin of the Sanskrit drama goes back to hoary antiquity. The writer traces it from the train of Aśvagōsha and Bhāsa of the 1st and 2nd century B.C. to the present day. She divides the plays taken up for study under a number of headings like biographical historical, humorous, mythological etc. and under each head, she arranges of plays in an alphabetical order of the names of the playwrights, Their date, the plot, characterisation and critical appreciation follow. This is the first time in history when such a study is undertaken. She feels that an unbroken chain in the development of the Sanskrit drama shows its vitality and dynamism. We are made to learn, from a study of

this book "that Sanskrit drama is so modern as to have plays in it on the problem of Kashmir and the irrigation policy of India".

Varadachari, V.; *The Sanatkumara Samhita*; (*Brahmavidya* Vol. XXXV, parts 3-4, Dec 1971, pp. 227 to 257).

The book takes the first place amoung the Pāncarātra works dealing with temple rituals. It comes under the Munibhāṣita type, as it was narrated by the eminent sage Sanatkumāra, one of the mind-born sons of Brahma. The reasons for the title Pāncarātra are given elaborately. The book is divided into 4 sections, Brahmarātra, Śivarātra, Indrarātra and Ṛsirātra. The purport under each heading is given separately. The established domestic rituals, duties of āsramas and castes, the 4 kinds of samnyāsas, rituals and prayers connected with consecration of idols with special reference to mantras, Nyāsas, mudrās and mandalās are all discussed. The work has exerted great influence on the Visiṣtādvaita system in adopting Prapatti as a means of mokṣa. Even the refererence to caste mark (Ūrdvapundra) is prominently made.

PAINTING

INDIA

Ajanta Murals, An album of eighty-five reproductions in colour illustrated by I. LALL. A. Ghosh, M. N. Deshpande Dr. B.B. Lal, photography by S.G. Tiwari, edited by A. Ghosh (New Delhi, Archaeological Survey of India, 1967, X-71, pp., LXXXV pls., 24 figs.- *REV*: *E & W*, New Series, Vol. 20-No.4 (December 1970), p.474) :

Reproduces the most outstanding paintings which decorate Ajānta. The plates are preceded by an outline of the history of the place, and its importance in the development of Indian culture and art.

PHILOSOPHY

GENERAL

Chatterjee Syamadas: *The Known and the Unknown from the Scientific and Philosophical point of view* (*BRMIC*: August 1972 Vol. VIII No.8, pp. 281-287):

The growth and history of physical science and its changing theories narrows down the seeming conflict between science and philosophy and hints at the possibility of the influence of the unknown on man. "And yet, at this stage of his development, ordinary man stands as on a seashore with tried experience in the form of land which he knows, and mystery in the wide expanse of the ocean which he does not know but which he yet feels is powerful enough to influence his destiny."

INDIA

Rangacharya, M. and Varadaraja Aiyangar, M.A.. (Madras, *The Vedanta-sutras with the Sribhasya of Rāmānuja*; (The Educational Publishing Co., III, 1965, CXII, 611 pp., Rev. *E & W*.- New Series, Vol.20—No.4 (December 1970), p. 487);

This is a re-edition of a translation of one of the most famous works of Indian thought, made by two famous Sanskrit scholars.

RELIGION

INDIA

Balasubrahmanya Iyer, K., B.A., B.L., the late Dharma Rakshāmani: *Upanayana Māntrārthangal* Tamil and Sanskrit published by Śrī Kāmakōti Kochasthānam, 4, Francis Joseph Street, Madras. pp.117 2, price Re. 1-50).

This is a collection of essays on the sanctity and meanings of the Upanayanam (Initiation ceremonies of the Dvijas, twice born, written by the late author on Kāmakōti Pradeepa and now published in the form of a book after his death.

Deleu, Josef; *Viyāhapannatti (Bhagavai) the fifth anga of the Jaina Canon*: (R jgsuniversiteit to gent woerken uitgegeven door de Faculteit Van de Letteren en Wigsbegeerte, 15le Afl. 359 pp. Brugge De Tempel' 1970; Price Bel fr. 890 *Rev. BSOAS* Vol. XXXIV pp. 3, 1971, pp.612—614).

This is an analysis in English, of the longest and the most important Jaina canonical text *Viyāhvpannatti*. It consists of 41 *sayas* some of which deal with the dialogues between Mahāvīra answering questions from Goyama. Dr. Deleu feels that with the

decline of tradition, the precise teachings of Mahāvira were lost and they were replaced by stereotyped dialogues with Goyama.

Dhavamony, Mariasusai, *Love of God according to Śaiva Siddhānta*) (Oxford University Press, 1971 pp.1+XVII+1—492 Price 84 sh. net, U.K.only. *Rev,, ABORI*; Vol LII, Pts.I to IV, 1971, pp. 274—275):

The book is devoted to the Śaiva observance of Love of God enumerated in the four categories of works, the Vedas, 28 Śaiva Āgamas, the 12 Tirumurais, and the 14 Meykaṇḍa Śāstras (the last two in Tamil). The book in five parts, deals with the evolution of the concept of Bhakti or Anbu through Vedic devotion, Upaniṣadic theism, Śivabhakti in Mahābhārata, Bhakti-śutras and on Bhakti in *Gita*. A synthesis of the doctrine of Bhakti, is made with its theological pre-suppositions, as a way of salvation and the life of mystic. A bibliography of Sanskrit and Tamil works is appended. The work is a good contribution to S'aivite Bhakti Literature.

Gonda, J; *Viṣṇuism* and *Śivaism: a comparison* (School of Oriental and African Studies, University of London, Jordan Lectures in Comparative Religion IX, VII, 228 pp. London; University of London, Athlone Press, 1970. Price £ 3.50 *Rev., BSOAS* Vol. XXXIV Pt. 4. 1971, p. 614):

The author's aim is to compare Viṣṇuism and Śivaism as religions. Chap. I deals with Viṣṇu and Rudra-S'iva in the Veda and Mahābhārata and Chap. II their rise to prominence; Chap. III is devoted to theology; Ch. IV to the rituals and the next chapter, to the inter-relations between the two 'religions'. The final chapter deals about the two Gods as they appear in folklore, myth and literature. The range of approach is very wide though the author has not touched archaeology or phenomenology of religion.

Gopinatha Rao, T. A.: *Elements of Hindu Iconography*; (Second edition, 1968, published by Motilal Banarsidass, Delhi Royal octavo, pages 1760 in 2 volumes in 4 parts, illustration 282. price Rs. 450).

This work is a well known contribution to Hindu Iconography. The book contains explanations of technical terms of Hindu icono-

graphy and meanings and significance of the various gods and demi-gods of the Hindu Pantheon.

Long, J. Bruce; *Śiva as Promulgator of Traditional Learning and Patron Deity of the Fine Arts*: (*ABORI*, Vol. LII, Parts I to IV, 1971, pp. 67-80).

The cult of Śiva, as contrasted with that the Viṣṇu, has been distinguished by marks of strict asceticism and austere practices of Yoga. In the divine mode of appearance as *Dakshināmūrti*, he is the *Jagadguru*, promoter of Vedic knowledge and traditional learning. He is supposed to have revealed the grammar to Pāṇini. He is usually looked upon as *Vedātman* and *Vedasarīradhārin*. The 28 Āgamas were personally dictated by him to Agastya and Nārada. With his third eye (*Lalātanētra*) he sees facets of reality denied to the vision of oher Gods. As *Natrāja Murti* he is the divine dancer, promoter of the fine Arts, who revealed knowledge of 64 arts (*Kalājnāna*) to Bhārati. His *Chinmudra* brings awakening and spiritual insight to the souls of men, redeeming them from *avidyā*, *dukkha* and *samsāra*.

Pandey, Raj Bali Dr.; M.A., D.Litt., Vidyaratna, Ex-Principal, College of Indology, Banaras Hindu University Varanasi and Vice Chancellor, Jabalpur University, Jabalpur: *Hindu Samskaras*: (Published by Motilal Banarsidass, Delhi, 1969; pp. 327 XXVII, price Rs. 30).

The Hindu Samskāras relate to the duties obligations, secular, religious and sometimes social, of the Hindus through which the performer obtains the full benefits of life here and hereafter. These Samskāras are based upon Vedas, Brāhmaṇas, Dharma Sūtras, Grhya Sūtras, Paddhatis and to some extent on local social customs.

The work discusses the source, meaning, number and purpose of these Samskāras under five heads viz. Pre-natal, Natal, Educational, Nuptial and Funeral.

Smith, Daniel; Vaiṣṇava Iconography; (Pancarātra Parisōdhana Pariṣad, Madras, 1969, pp. XXXII. 336, *Rev.. Bramavidya*, Vol. XXXV, Parts 3-4, December 1971, pp. 336-337).

The Sanskrit text of this work, in eight chapters, is edited by K. K. A. Venkātacharya with an introduction by Dr. M. Narasimhāchārya who has pointed out the position of Pāncarātra texts in Hindu society. The introduction in English is by Dr. Smith while V. Ganapati gives 21 illustrations. The aim of the author is to bring together relevant passages on select topics from Pāncarātra texts and marshal them in order. Full details about the importance and necessity for image worship with further details regarding materials for preparing or moulding icons, pedestals to support icons, major divinities and minor divinities, their decorations and weapons and mode of worship are outlined. Mr. Smith is specialising on the Pāncarātra for years and the book is an authoritative one for those interested in the practical aspects of Hindu religion.

Somadeva Sarma, V., Srivatsa: *Nārapathu Samskārangal* (*Forty Samskāras*) in Tamil and Sanskrit–Published by Vaideka Dharma Vardhini, 2, Station Road, Madras-33, (pp. 168 + VIII, price Rs. 3).

This purports to give the inner meanings of Samskāras like Garbhādāna and their mantras, explain their use with an appendix relating to Punyāhavācanam, Mukandam, Jayāthi Homam, Nāndi Srārdham and a glossary of Vaidik terminology.

SOCIOLOGY

INDIA

Motwani, Kewal; Manu, *The Origins of Social Thought*; (Bhavan's Rupee series, 74. Bharatiya Vidya Bhavan, Bombay, 1970, Pages 29, Price Re. 1/—Rev. *Brahmavidya*, Vol. XXXV, parts 3-4, Dec.1971, pp.378-379):

In this booklet a lucid and brief account of the social thought of Manu, on Varṇas and Āsramas is given. The author feels that the message of Manu is at present important when having accepted Western technology, institutions and ideas en bloc, the Indians are well on the way towards becoming a sick civilisation like the West.

Varadachari, Venkeepuram; *Psychic Research, Occultism and Yoga*; (Higginbothams Madras, 1970, pp.XXV, 257, Price Rs. 5/- *Rev. Brahmavidya*, Vol. XXXV, Parts 3-4. December 1971, pp. 384)

The author relates here the experiences and inward transcendental conditions of Indian yogins to the phenomena and objectification of para-normal conditions of western mediums, sensitives, hypnotists etc. A synthesis of these is discussed with documentation. The acquirement of psychic powers is not an end in itself but must lead to the spiritual harmony with all beings.

Younger, Paul; *The Indian Religious Tradition* (Bharatiya Vidya Prakasa, Varanasi, Price Rs. 15/- *Rev., Sanskrit*, Journal of the Deparment of Sanskrit University of Delhi, Vol. I, No.1, December 1971, pp. 147 to 149.)

The author, Prof. Paul Younger, a Sanskritist of the Mc-master University, Canada, has divided the development of Indian religion into four broad periods to unearth the unity exhibited in the social, political and religious way of life of the Indian people. He feels that from the Indus to the Ṛg Vedic culture and again through the succeeding periods the spirit of religious experience or 'the concept of Dharma' continues in spite of devastating invasions and violent foreign impacts. Hence the study of Sanskrit in view of its importance as an aid to the study of continuity of civilization, which has preserved Indian culture and tradition up to the present day. The books carries a number of pictures, and plates supporting the author's point.

EXTRACTS OF ARTICLES

ONGES OF THE LITTLE ANDAMAN

[An article on Onges was published in the 1957 issue of the Bulletin giving a brief account. This gives a detailed account. —*Editor.*]

The Onges inhabit the Little Andaman—a 432-square-mile island 31 miles from Rutland. According to the 1961 Census, their number had dwindled to 129. Unless something is done, this colourful tribe may become extinct.

Of all the aborigines of Andaman Islands, the only ones we know, and who are friendly with us, are the Onges of the Little Andaman Island. The Andamanese, who once inhabited the Great Andaman Island—which comprises the North, the Middle and South Andamans—are now very nearly extinct.

According to the last count, they numbered only 129. They have, therefore, ceased to be of any consequence as an aboriginal tribe.

The other aborigines on the Andamans Islands, the Jarawas, are to this day extremely hostile. Many attempts were made by the British to befriend them. Since Independence, we have also tried to make friends with them. But they continue to remain implacably hostile. And even a chance encounter with them in what they consider to be their domain results in their unleashing poisonous arrows. So that leaves only the Onges, the delightful friendly tribe who are found exclusively on the Little Andaman, a small island, 432 square miles in area, lying 31 miles south of Rutland, a tiny island a little off to the south of Great Andaman Groups of Islands,

Are the Onges any different from the rest of the Andaman aborigines? Well, today they are. But it would appear that in the remote past, when they first came to these islands, they were the same people and spoke the same language. That is apparent from the common grammatical structure of the languages spoken by the Onges and the other aborigines. One of the Andamanese legends has it—and they believe in it to this day—that once there was a very great cataclysm and, as a result, a substantial part of their land was submerged under the sea. They were separated from one another and their languages began to develop seperately. Now they cannot even speak to one another!

Who are the Onges ? Are they Negroes ?

At one time, there was a commonly-held belief that all the aborigines living on the Andaman Islands were descended from African slaves—men and women—on board a ship, a Portuguese vessel, which was wrecked on these islands while they were being transported. But a detailed study of the characteristics of the Andamanese aborigines reveals that they are not African Negro but Nigrito and have more in common with the Semangs of the Malacca Peninsula and the Aetas of the Philippines than with the African Negro.

How long have the Onges been on the Little Andaman Island? No one can say for certain, but it is obvious that they have been there for thousands of years. The only source which proves their antiquity: the kitchen middens which are dotted all over the island. Lidio Cipriani, an Italian anthropologist who dug up some of these middens, describes how in most cases he found shells at the base of the middens fossilised—proof positive that they had lived there for thousands of years.

And how long have we known them? Owing to heavy surf all through the year, landing on the Little Andaman Island was considered to be a hazardous undertaking for many years, even after the British had established there first settlement on Chatham Island on the South East Bay of the Great Andaman in 1789, The first recorded landing was made in 1825 by T.E. Alexander, an English naval officer. He was the ffrst person to report the existence of "a fierce tribe of naked Onges".

Were they really fierce? Very much so to begin with. It was proved when the entire crew of the ship "Assam Valley" (consisting of the Captain and seven others), which landed on the Little Andaman in 1867, was never heard of again. The "Kwantung" another ship, was sent to find out what had become of them. No landing could be effected because of heavy surf and hostile attacks mounted by the Onges. Next the "Arrancan" was sent on what was then described as a punitive expedition. There followed heavy fighting between the ship's company and the Onges. As many as 70 Onges were killed. (Five of the ship's crew were awarded the Victoria Cross). But subsequent contacts proved that the Onges were basically friendly and not hostile.

Much of the credit for befriending them goes to M.V. Portman who during the years 1885-87 was in charge of a home for the Andamanese. He paid many visits to the Little Andaman Island and got to know the Onges well and made friends with them.

The first recorded reference to the aborigines of the Andaman Islands is found in the notes left by two Arabs who were travelling through India and China during the seventies of the 9th century A.D. According to them, the complexion of the Andaman Islanders was "black, their hair frizzled, their countenance and eyes frightful, their feet very large and almost a cubit in length" and they went about "quite naked". Marco Polo, the Venetian traveller who passed through India in 1290 A.D., went one step further in describing them as having "heads like dogs and eyes likewise".

As against this, Dr. Frederic J. Mouat, who was sent out by the Government of India to advise on the suitability or otherwise of forming a penal settlement on the Andamans, writing in 1863 A.D., called them "the most perfectly formed little beings in existence. In proportion to their size, their limbs present a remarkably good muscular development, and the whole form is as elegant as that of any European".

Well, it seems quite obvious that neither the Arabs nor Marco Polo ever set eyes on any of the Andamanese aborigines. On the other hand, Dr. Mouat seems to have been carried

away by his enthusiasm, because they are neither hideous nor quite "as elegant as.........any European". I think the main blemish in their physiognomy is that they are steatopygous (fat-buttocked). Though I must confess that some of the black beauties that I saw among the Onges (during my brief visit to the Little Andaman some years ago) could equal, if not surpass, the charms of many a black beauty who displays herself on the stage of the Folies Bergere!

There is a widely accepted, albeit mistaken, belief that the Onges are pygmies. This is not so. The height of an Onge man on an average is a little less than five feet and the women are about six inches shorter than the Onge man. Some of them have charcoal-black complexion, some are just black and some are even reddish brown. The Onges keep their hair very closely cropped. Barring a few pieces of dried leaf and straw—which they use as a G—string—they go about naked. Unlike most other aborigines elsewhere, they do not tattoo. But they love to paint themselves with white clay and ochre; mostly geometric patterns; nothing symbolic.

The Onges build themselves two kinds of shelters for living—temporary shelters and permanent huts. Their temporary shelters are very simple. They have no walls, only a sloping roof rising from the ground. The permanent huts are also simple. They are circular in shape. They use waterproof mats for making their roofs, each mat well overlapping the next one and thus forming an enormous umbrella-shaped roof resting on poles. In the centre, right below the point which is the apex of the roof, they keep a fire. There is also a fire kept next to each bed. But the one in the centre is used for communal cooking during the rainy season when it is not possible to cook in the open.

Incidentally, the Onges do not even now know how to light a fire. Therefore, they keep it alight all the time. But how do they obtain fire? That is most interesting. When lightning strikes a tall tree, for days, because of humidity, the tree continues to smoulder. The Onges take advantage of this and carry burning wood from the smouldering tree!

Inside an Onge hut, there are no partitions or compartments. The beds are arranged like the radii of a circle. They are so close

to the outer edge, that everyone sleeps with his head towards the centre. The beds as such consist of a number of sticks put together to make a flat platform resting on four sturdy sticks, acting as props at each corner, driven into the ground. As a head-rest a piece of tree trunk is used.

The Onges love dogs. Judging from the evidence of the kitchen middens, the Onges had no dogs in the olden days. They are a comparatively recent introduction into the island But now they have become such an integral part of the lives of the Onges that they share everything with their masters. They eat the same food; they sleep in their beds; and some Onge women are even known to suckle the little puppies as they would their own babies!

Marco Polo described the aborigines in the Andaman Islands as cannibals because, to quote his words, they "eat everybody that they can catch". This myth was again repeated by some other travellers who visited, or wrote about, these islands in subsequent years. There is no doubt that the islanders were, in the old days (and the Jarawas still are), allergic to all strangers, because, at one stage, the object of all visitors was to capture them and take them away into slavery.

A Lieutenant Blair, after whom Port Blair is named, said: The remembrance of their sufferings, which nothing could efface, was so vivid as to produce those feelings of enmity which nothing but the blood of all whom they regarded as their foes would eff ce" Therefore, they killed anyone who happened either to visit the islands during the course of their voyages or got ship-wrecked there. The stranger would be killed and his body burnt. And then they would hold all-night dances round the fire.

No one who happened to see such a weird spectacle could help but really believe that the aborigines of the Andaman Islands were cannibals. Proof positive that they are not, and have never been, cannibals is that, in the kitchen middens of the Onges, no human bones have been found scattered in the refuse. They are found separately clearly interred in their graves. Besides, as the Onges say, why should they eat human flesh, which will only make them sick, when there is such an abundance of food all round?

The Onges are collectors of food. They have never been cultivators and know no agriculture. The Island about in natural foods. They generally make a meal of the jackfruit, which they roast in hot ashes till it becomes eatable Or of the Pandanus, which has a taste similar to the pineapple. They also eat yams, some of the yams being as big as footballs. Then there is the food from the sea. The Onges harpoon their fish or shoot it with a bow and arrow. They are particularly fond of the pilchards. Apart from fish, they catch molluscs, crustacea, lobsters, caryfish and crabs. They are also very fond of pork. With the help of the dogs, they chase the wild pig and ultimately kill it with an arrow harpoon. The pig hunt is a time of great excitement for the Onges.

But what the Onges love most is honey. When an Onge finds a nest of bees, he puts a mark on the tree, thus establishing his ownership. At the time of gathering honey, however, everyone helps. An interesting feature of the way the Onges gather honey is that they climb up the tree without providing any protection to their bare bodies. But here nature has come to their rescue. On the Island grows a bush called tonjoghe. All they have to do is to chew some of the leaves of this bush and smear the pulp all over the body. It provides total immunity from an attack by the bees.

They do not eat chicken or any other bird, for they believe that the birds harbour spirits of the dead. For the same reason, they do not eat lizards, jungle cats, bats, rats or snakes, for they too are supposed to carry spirits of the dead.

Other than water, the Onges know no drink. But they like to smoke. Of late, due to contact with the non-tribals, they have taken to smoking tobacco. But this was not always so. Originally, they used to make up their smoke of fragrant leaves. They use a roughly fashioned pipe made out of the claw of a crab to smoke. In the kitchen middens, many such pipes made out of the crab's claw have been found.

The Onges do not know the use of either salt or sugar. But they eat nothing raw. All food is lightly boiled or roasted.

The Onges are adept in the art of canoe-making; and the making of a canoe is always an important event for them. The

tree selected for the purpose invariably belongs to one of the species of Sterculia. The tree is felled and hollowed out. The process is slow and laborious, for they use only a very rudimentary form of hatchet. The tree is felled and hollowed out. Then before launching, the canoe is decorated with ochre-like they would their own bodies.

The Onges are great believers in the family as a unit. They always move in family groups. They are strictly monogamous and there is no divorce among them. No cases of polyandry polygamy, bigamy or incest have come to light. Once they are married, sexual fidelity is the accepted norm. But before marriage, young boys and girls mix freely and promiscuity is accepted. Marriage can take place only with the consent of the family. Before the marriage ceremony takes place, both the bride and the bride-groom are painted with white clay. Then follows an address by one of the elders enjoining on the bride and the bride-groom to make a good husband and wife to each other. The actual ceremony consists of the elders putting the arms of the bride and the bride-groom round each other's necks and then making the bride-groom sit on the lap of the bride. (Interestingly enough, the traditional method of greeting is also to sit on the lap!)

The Onges have no clear concept of religion, though it would appear that, as in Palaeolithic times, they do have some kind of a belief in the survival of the spirit after death and a fear of its return. Therefore, they bury their dead bound in a knee-to-chest position. (The dead are buried under the family beds in the living shelters). But there is no evidence of a belief in any form of cult. Nor do they have any prayer or votive offering and the concept of propitiation is not known.

The two things the Onges love most are eating and dancing—the former sometimes takes the form of orgies of eating and the latter into holding all-night sessions. Lidio Cipriani, who lived with the Onges for nearly six months in 195?, witnessed some of these orgies. He recalled:

"During these orgies I have seen a group of about sixty Onges demolish in a few days ten pigs and a dozen large wooden vessels full of honey, with basket after basket of fish, caught every night by women."

As for dancing, A. R. Radcliffe Brown has left this vivid description:

"When all is ready, a man who has volunteered to sing the first song takes his stand at the sounding board and sings his song through. When he reaches the chorus the women take it up and repeat it after him, and as they do so each woman marks time by clapping her hands on the hollow formed by her thighs, the legs being crossed one over the other at the ankle. The singer continues to sing, thus leading the chorus, and at the same time marks the time of the song by beating on the sounding board with his foot. As soon as the chorus begins, the dancers begin to dance. When the singer and the chorus get tired, the singing ceases, but the man at the sounding board continues to mark the time for the dancers. The singer repeats his song several times, and he may sing several songs, each repeated several times. When he gets tired he is relieved by another man. In a dance that lasts for any time, one singer succeeds another, and the singing and dancing are kept up continuously........"

I too saw them dance when I was with them. But they seem to have abandoned the sounding board, which is supposed to look like a Crusader's shield. (They have never used any other accompaniment). But I can testify to the abandon with which they dance—both men and women. Even children join.

What is the future of the Onges? Who can tell? One hopes that they do not meet the same fate as the rest of the aborigines on the Andaman Islands. In 1858, at the time the British occupied the Andaman Islands, the aborigines were estimated to be about 3,500. At the turn of the century, in 1901, they had been reduced to 625. And, according to the 1961 Census, they counted 129 souls only. (They figures do not include the hostile Jarawas or those of the Sentinalese, who live on a tiny island called Sentinal, and are also supposed to be Jarawas, and are equally hostile). The figures of the 1971 Census are not yet available. Today there may be a few more or a few less than in 1961.

How the aborigines reached this state of extinction is a rather sordid chapter in the history of the Andaman Islands. It is a story of attacks and counterattacks—attacks by the aborigines

because the felt that everyone else was on interloper and that their domain was being trespassed upon, followed by many a counter-attack, mostly savage, by the authorities, leading to death and destruction. Diseases like measles, influenza and syphilis, which followed the advent of the so-called civilisation, also took their toll. The Onges have managed to survive, because all these years they were isolated on their little island. Now, however, civilisation has caught up with them. Their area is being "developed". Will they survive it? Or will it be like the kiss of death?

I personally shall never forget the one day that I spent in their midst some years ago. The sound of their laughter and their song still rings in my ears. Their good humour was infectious. Although it was not possible to speak to them, one could communicate with them through the language of gestures. And it was more than apparent that there were a cheerful happy lot. To me they appeared to be the very embodiment of the Noble Savage. They are the only living remnants of Palaeolithic man in our country. I do earnestly hope that we can do something to save them from extinction. (By N. IQBAL SINGH in *Illustrated Weekly of India* dated 6-8-1972).

THE STUDY OF INDIAN LITERATURE IN THE SOVIET UNION

(*By Evgent Chelyshev*)

The study of Indian literature began in our country long before the revolution in the late 18th century. It was then that the first Russian translations appeared of several works of the literature of Ancient India. Professor Ivan Minayev's outline of Ancient Indian literature in the *History of World Literature*, published in Petersburg in 1880, may be regarded as a summary of the work done in Russia in translating and studying Ancient Indian literature. One should also mention such outstanding Russian scholars of Sanskrit as Academicians Fyodor Shcherbatskoy and Sergei Oldenburg, who laid the firm foundation of Indian philological studies in our country, Their main attention was also directed to study of the Ancient Indian classical heritage. Such works as Oldenburg's *Buddhist Legends and Buddhism, On the Sources of Certain Indian Dramas* and The *Peregrination of*

Fairy-Tales, Shcherbatskoy's *The Theory of Poetry in India* and many other studies have not lost their scientific importance to this day.

At the present time the traditions of studying Ancient Indian literature are being successfully continued by such researchers as Oktyabrina Volkova, Pavel Grinster, Vladimir Kalyanov, Isaac Rabinovich, Igol Serebyrakov, Alexander Syrkin, Vladimar Erman and several other Indologists working in different republics in the Soviet Union. In their studies they strive to examine the literature of Ancient India in connection with world literary developments, drawing broad parallels between the various forms and kinds of Ancient Indian Literature and the forms and kinds of literature in other countries, akin to it in ideological and aesthetic substance.

For contemporary Soviet scholars, Ancient Indian literature is not a mouldy fossil one can admire only as an antiquarian wonder; in it they see the source of a living and developing tradition, which exerts a beneficial influence on the growth of literature and of the whole of Indian culture in modern and recent times.

Our scholars pay great attention to analysing the social essence of Ancient Indian literature, its links with the epoch and the history of the people, its creator, in the endeavour to disclose conflicting trends within it, reflecting the views of the antagonistic classes and groupings of Ancient Indian society. As examples of such an approach to an assessment of Ancient Indian literature I would mention among others, Pavel Grinsters *Studies of Ancient Indian epic*, Igor Serebryakov's *Essays on Ancient Indian Literature*, and Isaac Rabinovich's *Forty Centuries of Indian Literature.*

We have not broadened the very concept of Ancient Indian literature, which is no longer confined to literature in Sanskrit. It also embraces the Ancient literature of Southern India, above all Tamil. Here I should mention the translations and studies of Kural and Silapadikaram and Alexander Pyatigorsky's studies of Ancient Tamil religious and philosophical literature connected with Buddhism. The thorough study of monumental works from the point of view of philosophy, history, religion, aesthetics,

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textology and literary scholarship is a trend typical of the Soviet Indologists, especially in the case of works translated into Russian for the first time.

While the existing tradition of Indological studies was continued, a new branch of Indology—the study of Indian literature in the new times and the present-day period arose in our country after the October Revolution. Its founder is rightly considered to be Academician Alexei Barannikov, who in Leningrad in the early twenties with the help of the Indian scholar R. Sankrityāyan, then living in the Soviet Union, began the teaching of living modern Indian languages and the study of their literatures. (In Moscow such work was initiated by M.I. Klyagina-Kondratyeva with the assistance of the Indian specialists S.H. Wafa and S. Dutt, then living in Moscow).

A start to the study of mediaeval, modern and recent Indian literature was made in numerous works by N.A. Barannikov (translations and studies) on Tulsi Das' *Rāmayana,* Lallu Ji Lal's *Premsāgar*, his *Short outline of Indian Literatures of the Medieval period,* his *Studies of Soviet-Indian literary contacts (Gorky's Writings in India, On translations of A. M Gorky's Works into Indian Languages)* and other studies published in the thirties and forties.

Although, due to insufficient material, the author at times confines himself only to posing a particular question, while some of his conclusions and judgements now seem to us one-sided or outmoded, in the main, many of his works retain their importance to this day. In particular, the view A. Barannikov put forward in his day, of connections between the modern Indian literary tradition and that of Sanskrit and of the democratic character of this tradition—a view his pupils are now developing—has retained its full actuality.

Particularly extensive studies of the modern and recent literature of the peoples of India began in the Soviet Union in the mid-fifties when an Indian Philology Section was established at the U.S.S.R. Academy of Sciences Institute of Oriental Studies; it was transformed in the early sixties into a large Department of Oriental Literature. A numerous team of scholars work in this department.

At the present time the literatures of the peoples of India are studied in the Soviet Union not only at several scientific and educational centres in Moscow (the Institute of Oriental Studies, the Gorky Institute of World Literature and Moscow University), but also in Leningrad (the Leningrad branch of the Institute of Oriental Studies and Leningrad University), in Tashkent (the Institute of Oriental Studies of the Uzbek S.S.R. and Tashkent University), at Dyushambe (the Institute of Oriental Studies of the Tajik S.S.R) and in several other republican and regional centres.

Each of these centres specialises in a particular field of research. For instance, the Institute of Oriental Studies in Moscow devotes principal attention to studying contemporary problems, widely embracing the literatures of the peoples of India and posing theoretical problems. The Gorky Institute of World Literature concentrates on the problem of the links between Indian literature and world literature. The team of specialists at Moscow University are mainly engaged in compiling text-books of Indian literature.

Traditions of Russian Indological studies are continued in Leningrad where the Ancient and Mediaeval literature of the peoples of India is studied, as well as literatures in the Bengali, Marathi and Telugu languages. First steps are being taken at Tashkent and Dyushambe in studying the modern literature of India and mediaeval Indian literature in Persian.

In recent years many monographs, collections of articles and translations of scientific works and fiction have been published in the Soviet Union, more than thirty Candidate-of-Science and two Doctor-of-Science theses on Indian literature have been defended. But the point is not simply quantitative growth. What is much more important, in my view, is that our Indologists are starting to draw general theoretical conclusions.

What are the most important features of our Indian literary studies to day ?

In the first place, the studies cover a broad front, embracing a large number of literatures of the peoples of India. At the present

time we are studying literatures in the Hindi, Bengāli, Punjābi, Gujarāti, Urdu, Marathi, Tamil, Telugu and Malayālam languages. In the next few years we propose to start the study of other literatures of the peoples of India.

I would like to note the attention Soviet Indologists are paying to the work of writers who are determining the most important trends of development of the national literatures of India, such as: the Bengali writers Madusudan Datta, Bankimchandra Chatterji, Rabindranāth Tagore, Saratchandra Chatterji, Nazrul Islam, Manik Bannerji, the Hindi authors Harischandra, Premchand, Prasād, Nirala, Pant, Rashpal, Vrindavanlal Varma, Dinkar, Amritlal Nagar, Upendranath Ashk; the Urdu authors Galib, Iqbal, Rusva, Krishnan Chandar, Manto, Rajendra Singh Bedi, Ali Sardar Jafri; the Tamil authors Subramania Bharathi, Kalki; the Telugu authors Guruzada Apparao, Sri Sri; the Malayālam authors Vallathol Sankara Kurup; the English-language authors Mulk Raj Anand, R K. Narayan, B. Bhattacharya and others. All these authors and several others are the subject of articles published in special scientific publications, as well as in books and journals for the broad reading public.

Soviet Indologists have recently been taking a noticeably more lively interest in the literature of the mediaeval ages, a profound study of which is essential for solving such important scientific problems as periodisation, the transformation of traditions and so on. On this plane it is very important to study the work of such mediaeval authors as Kabir, Sūrdas, Jaidev, Mukundaram, Nazir Akbarabadi, Guru Nānak, Vémana and several others.

The work of Galib, Tagore, Iqbal and Premchand attracts particularly great attention among our literary scholars. We can already speak of "Tagore studies" or "Premchand studies" as separate new branches of our Indological literary research.

Soviet Indologists are guided by a scientific methodology which requires literature to be regarded as a social phenomenon, inseparably bound up with the history of the people, which rules out any dogmatism and schematism, which calls for uniting the ideological and aesthetic analysis of literary works, surmounting

mere description, drawing profound general conclusions from facts and not merely "amassing" them.

I may mention the following problems we are studying in connection with our analysis of modern and recent Indian literature.

(a) The problem of traditions and innovation. Assesment of traditions from the point of view of their fruitfulness in the present era, determining what of the cultural heritage of the past has outlived its time and what is a living creative force assisting the growth of contemporary literature:—The study of traditions helps Soviet Indologists more profoundly to interpret the formation of contemporary literature and of particular literary genes, he formation of critical realism as the basic method of Indian literature in the late 19th and early 20th century. Here such collections as *The Dramaturgy and Theatre of India, The Poetry of the Peoples of India, Contemporary Indian Prose,* Natalia Vishnevskaya's book *Indian one-Act Play* should be mentioned.

(b) The problem of inter-relations and mutual influence between Indian literature, and between Indian literatures and those of other countries (studies by Pavel Grinstser and others).

(c) The problem of national and international elements in litera-ture. Studying the specifically national features of each Indian literature and at the same time elucidation the general laws of the development of literature of India:—In this regard I may mention collections published on the occasion of the centenary of Lenin's birth—*V.I. Lenin and the Literature of Foreign Oriental Countries,* and on the occasion of the 50th anniversary of the October Revolution—*M. Gorky and the Literature of Foreign Oriental Countries.*

(d) Problems of aesthetics:—Soviet Indologists have great achievements in the study of the categories of Ancient Indian aesthetics. At the present time we face the task of studying the evolution of aesthetic thought in modern and contemporary India. An approch to a solution of this problem was made, for instance, in articles on "The Evolution of Aesthetic Thought in Contemporary Hindi poetry" and "The Aesthetic Views of Rabindranāth

Tagore" (E. Chelyshev) published in 1964 and 1966 respectively.

(e) Clarifying the role of Indian literature in the national liberation struggle of the Indian people and in the building of a new life, the concept of man in Indian literature, in other words, the study of the evolution of the humanist ideal in the work of leading Indian writers; The problem of creative method, the ways and forms of the moulding of realism, the growth of critical realism and the trends of socialist realism in Indian literature, study of the specific artistic features of Romanticism and of modernist trends in the contemporary literature of the peoples of India.

(f) The problem of the periodisation of the history of Indian literature, the interpretation of the general laws of its development:—A discussion was held in the columns of the *Peoples of Asia and America* journal on problems of periodisation, in which a large number of scholars from Moscow, Leningrad and Tashkent took part.

The solution of all these general theoretical problems is an urgent task for us for the further reason that our scholars of Indian literature are currently participating in compiling the ten volume *History of World Literature*, where the entire history of world literature is to be reviewed on the plane of theoretical problems.

One must also mention the work, now being completed, of preparing a series of short outlines of the history of the literatures of the peoples of the Orient. The following books relating to Indian literatures have already appeared in this series: *Ancient Indian Literature*, *Punjabi Literature* by Igor Serebryakov, *Bengali Literature* by Inessa Tovstykh, *Telugu Literature* by Nikita Gurov and Zorya Petrunicheva, *Urdu* Literature by Nikolai Gleboc and Alexei Sukhochev, *Hindi Literature* by Evgeni Chelyshev, *The persian Language-Literature of India* by G. Aliev, *Marathi Literature* by Vladimir Lamshukov.

A further step in this direction is the preparation for producing large academic histories of various literature of the peoples

of India. This task will take many years and require the efforts of a large number of specialists.

In conclusion I would like to point to yet another important feature of our work. This is the broad scientific contacts of Soviet scholars with Indian scholars and authors, without which we could not succeed in our work. The publication of collective works (such as the jubilee collection of articles of Tagore in 1961) the collection devoted to the centenary of the death of Mirza Galib, the publication of our works in India and of the works of Indian scholars in our country, the participation of Soviet specialists in scientific conferences in India and the visits of Indian scholars to the U.S.S.R.—all these forms of scientific co-operation bear perceptible fruit and assist the successful continuation of our work in studying Indian literature. Well known in our country are the names of such Indian scholars, with whom we maintain scientific contacts, as Suniti Kumar Chatterji and Nagendra Abdul Alim and Ehtisham Husein, Shivdan Singh Chauhan and Namvar Singh, Prabhakar Machwe and George and many others.

The fruitful study in the Soviet Union of the literatures of India would be inconceivable without the successes achieved in the Soviet Union in the study of Indian languages. In recent years text-books and dictionaries of several Indian languages, Hindi, Urdu, Bengali, Tamil, Telugu and Punjabi, have been published in the Soviet Union. The publication of short outlines of grammar, as well as monographs on particular problems of the morphology, syntax and vocabulary of Indian languages, is an achievement.

Last year the Institute of Oriental Studies held a scientific conference to discuss the state of Soviet studies of Oriental literature and the tasks of their further development in the light of the decisions of the Twenty-Fourth Congress of the Communist Party of the Soviet Union. (*Soviet Literature, S.L.* 1972).

ĀYURVEDA, ITS HERITAGE

[Āyurveda or the Science of Life dates back to Vedic times. Apart from legendary figures like Dhanvantari and the Asvini "dévatas", there are many sages associated with its development. Chāraka was one of the earliest physicians and Susruta one of the most ancient surgeons. Buddhism gave a great impetus to the study of Ayurveda which was taught at the universities of Taxila and Nalanda.]

Dr O. P. JAGGI

Daksha Prajāpati liked the Moon God so much that he got all his twenty-seven daughters married to him. He asked the moon to see that all his daughters remained satisfied and happy.

As time passed, the moon developed a special love for one of his wives, Rohini. and started neglecting the rest. When the other sisters felt that there was no chance of the moon mending his ways, they all went to their father and complained to him. Prajapati was much annoyed and created a demon called consumption and ordered it to destroy the moon. Consumption started devouring him and gradually he diminished in size. The moon saw his predicament and went to Prajāpati and promised to love all his wives equally. Thereupon Prajāpati forgave him and restored him to his original size.

Consumption, the demon, once created could not be destroyed. When he asked Prājapati about his next command, he threw him to the earth and told him to satisfy his appetite by devouring the earthlings who indulged in too much sex.

This Puranic story is representative of the beliefs that prevailed in India in ancient times about the cause of disease. The

wrath of gods and goddesses, ill-treatment of cows and Brahmins, being impure and sinful, spells of the adversaries or enemies were considered the causes of disease. The Atharvaveda is full of propitiatory charm and incantations that were employed to get rid of all sorts of diseases. These charms were employed along with external or internal administration of herbal drugs.

Around the time of the Buddha in the sixth century B.C., the concept and practice of medicine entered a new phase. In the causation of disease, the supernatural gave place to the natural and the physical. It was thought that disequilibrium of the three humours, i.e., vāta, pitta and kapha, led to different diseases. By this time the practice of medicine in India had also come of age. Some of the biographical notes given in the Buddhist scriptures about the life of Jivaka, physician to the Buddha, amply testify to that.

Physician to Buddha

Jivaka was the son of a courtesan of Rajagriha (near Patna), the capital of the Maghadan empire. Immediately after his birth, the courtesan had him thrown on a dust heap outside the city. By chance, prince Abhaya, son of the emperor Bimbisāra, passed that way along with his retinue. He asked his attendants to find out whether the infant was dead or alive. On their telling him that he was alive (Jivat), the prince gave him the name of Jivaka, and had him brought up under his own care in his palace.

When Jivaka was eighteen, he left for Taxila (near Rawalpindi) which, in the 6th century B.C. and for a long time afterwards, was a well-known centre of learning. Jivaka studied medicine there for seven years under a world-renowned physician named Atreya. At the end of this period, his teacher gave him a test. He asked Jivaka to go round the place for three yojanas (four and a half miles) and bring black plants which had no medicinal value. Jivaka examined all the plants growing in that area but come back disappointed and told the teacher that he could find no such plant. The teacher agreed with him that there was no plant which was not of use either in one disease or another. He thus declared Jivaka successful.

When Jivaka left Taxila, he started looking for patients, but none would trust him as he was so young. At last, reluc-

tantly, a rich merchant let him treat his wife who had a chronic headache, which the most famous physicians had been unable to cure. Jivaka gave her medicated ghee, she felt much better immediately. As fee, Jivaka received sixteen thousand *kahapanas*, a man-servant, one maid and a horse-drawn coach.

Emperor Bimbisara had developed an anal fistula and his queens teased him by saying that he had got menstruation. The emperor consulted Jivaka. With only one application of a medicine, Jivaka is said to have cured him. Bimbisara appointed him royal physician, and physician to the Buddha and his monks.

The fame of Jivaka spread far and wide and he was consulted by the kings and the princes of their kingdoms as well.

Jivaka is said to have also undertaken many difficult surgical operations on the abdomen and the head.

Home Teaching

Training in medicine in those days was given by skilled physician-teachers in their own homes. These teachers accepted the candidates only after they were satisfied about their capabilities. Acceptance of a candidate was accorded in a formal ceremony when the teacher took his student thrice round a sacred fire.

The student lived with his teacher and helped him in every possible way. He helped and observed the teacher in the collection and preparation of the medicines and also accompained him when he made visits to the patient's homes. He was expected to be observant of every detail.

Equal weightage was given to theoretical and practical medicine A *common saying of the day was: "A person trained in theory only or in practicals only is like a bird who has only one wing."*

After obtaining his degree, the student was admonished :

"Acting at my behest thou shalt conduct thyself for achievement of thy teacher's purposes alone, to the best of thy abilities.

"If thou desirest success, wealth and fame as a physician and heaven after death, thou shalt pray for the welfare of all creatures beginning with the cows and the Brahmins.

"Day and night, however thou may be engaged, thou shalt endeavour for the relief of patients even at the cost of thy life or thy living. Thou shalt not commit adultery even in thought. Thou shalt not cover other's possessions. Thou shalt be modest in thy attire and appearance. Thou should not be a drunkard or a sinful man nor should thou associate with the abettors of crimes...

"No persons who hate or are hated by the king and public shall receive treatment from you. Similarly those who are of very unnatural, wicked and miserable character and conduct, those who have not vindicated their honour and those who are on the point of death, and women who are unattended by their husbands or guardians shall not receive treatment.

"No offering of gifts by a woman without the behest of her husband or guardian shall be accepted by thee. While entering the patient's house, thou shalt be accompanied by a man who is known to the patient and who has his permission to enter, and thou shalt be well clad and bent of head, self-possessed and conduct thyself after repeated consideration. Thou shalt thus properly make the entry. Having entered, thy speech, mind, intellect and senses shall be devoted to no other thought than that of being helpful to the patient and of things concerning him only.

"The peculiar customs of the patient's household shall not be made public. Even knowing that the patient's span of life has come to its close, it shall not be mentioned by thee there ; where if so done it would cause shock to the patient or others..."

Legendary Accounts

There are several legendary accounts about the origin of Āyurveda, According to one such legend, once upon a time, many epidemic diseases broke out, killing or incapacitating large numbers of people the ascetics and the medical men assembled on the slopes of the Himālayas in order to find ways of checking these epidemics.

Bharadwaja, who was already well versed in medicine and was well known in the field, volunteered to go to Lord Indra and learn Āyurveda, the Science of Long life, from him. He stated his purpose and predicament to Lord Indra who willingly imparted to him, in brief, the science of Āyurveda.

Bharadwaja, on his return, taught the science to other sages, one among whom was Punarvasu Ātreya. Ātreya, in turn, taught it to his six disciples. One of these disciples, named Agnivesha, on the basis of knowledge acquired by him, composed a treatise called *Agnivesha Tantra.* This Tantra was later on re-edited by Charaka and has come to be known as *Charaka Samhita.*

According to another legend, Susruta led a group of holy men to the hermitage of King Devadas of Varanasi, who was said to be an incarnation of Dhanvantari, the healer of the gods. King Devadas taught them the sacred Āyurveda. On the basis of this, Susruta around the sixth century B.C., is said to have composed a treatise called *Susruta Salya-Tantra*, which later on was re-edited and is now known as *Susruta Samhita.*

Surgical operations

Susruta was a great surgeon and distinguished teacher of surgery. He dissected dead bodies at a time when it was not done anywhere else in the world. *The surgical operations that Susruta performed and described are a test of his marvellous skill and ingenuity. He operated upon the intestines; removed stones from the ureter; performed cataract operation and, most remarkable of all, made an artificial nose where the patient's own had been cut off!*

His description of making a new nose where the original had been cut off (a practice common during those days and even much later) is particularly interesting. He writes: "First the leaf of a creeper, long and broad enough to fully cover the whole of the severed or clipped-off part, should be taken. A patch of living flesh equal in dimension to the preceding leaf should be cut from the region of the cheek and turned back and adhered at the severed nose which has been made raw already. The area should be dusted with the powder of liquo-rice, red sandalwood and the extract of Indian barberry. Two small pipes should be inserted

into the nostrils to facilitate respiration and to prevent adhesioned flesh from hanging down. The nose should be enveloped in cotton and several times sprinkled over with refined oil of pure sesamum. Ghee should be given to the patient to drink and he should be anointed with oil and also treated with purgatives. Adhesion should be deemed complete after the operation site has completely healed up."

For joining two portions of the cut in intestine in cases of strangulation, Susruta used a very ingenious material and device —the heads of the big black ants. These ants possess powerful claws which, when they clamp on flesh do dot leave it even if they themselves get killed. Susruta took such ants, opened their mouths, clamped their jaws on two portions of the intestine and then cut of the body of the ants. Inside the abdomen, as we all know, stitches made of cotton or hair cannot be used because they act as imperishable foreign material; on the other hand the heads of the ants dissolve in the body fluids after the doing their job.

While Susruta was a surgeon par excellence, Charaka was a physician. It is believed that he was the court physician to Emperor Kanishka and lived in the second century A.D. His description of different diseases, their causation, signs, symptoms and treatment is still followed by many of the Ayurvedic physicians. He has described the physiology of digestion and absorption of food and its conversion into different tissues of the body. Broadly speaking, according to him, the food that we take is digested and converted into *āhāra rasa*—blood, bones, marrow, semen and *ojas* successively. In the process are also produced the three *doshas* called *vāta, pitta* and *kapha*. It is the equilibrium of the three *dosha*, viz., *vāta, pitta*, and *kapha* that keeps they body healthy; their disequilibrium in different proportions gives rise to different diseases and symptoms. This Tridosha doctrine form the back bone of the physiology of the body and pathogenesis of the disease in the Indian system of medicine.

Ancient Indian physicians laid great stress on diet. Besides, Charaka in his *Charaka Samhita* devotes an entire chapter to the science of rejuvenation (*Rasāyana*) in which attempt made to ward off old age as long as possible, is described.

The highest honour a physician could aspire to was appointment as a royal physician had to look after the health and safety of the king. There was a constant danger that the king might be poisoned either by one of the enemies or by someone aspiring to become a king. Hence the science of detecting poisons in food had developed extensively. It was the duty of the royal physician to supervise the royal kitchen.

Comprehensive Studies

A great physician probably of the seventh century A.D. was Vagbhata. He is said to have composed two medical treatises namely *Ashtanga Samgraha* and *Ashtanga Hridaya*. *Ashtanga Hridaya* is still consulted by many of the Ayurvedic physicians in the South. Vagbhata is considered to be one of the three greatest medical men of ancient India together with Charaka and Susruta.

Francois Bernier, a French physician who came to India around 1658 A.D., and stayed in India for many years, in his voluminous work, *Travels in the Moghul Empire*, has this to say on Indian Medicine: "Of physic (medicine) they have a great number of small books which are rather collections of recipes than regular treatises. The most ancient and most esteemed is written in verse. *I shall observe, by the way, that their practice differs, essentially from ours, and that it is grounded on the following acknowledged principles: a patient with a fever requires no great nourishment; the sovereign remedy for sickness is abstinence; nothing is worse for a sick body than meat broth, for it soon corrupts in the stomach of one afflicted with fever; a patient should be bled only on extraordinary occasions and where the necessity is most obvious—as when there is reason to apprehend brain fever, or when an inflammation of the chest, liver, or kidneys has taken place.*

"Whether these modes of treatment be judicious, I leave to our learned physicians to decide. I shall only remark that they are successful in Hindustan, and that the Mughal and Mahommedan physicians, who follow the rules of Avicenna and Averroes, adopt them no less than do those of Gentiles (Hindus) especially in regard to abstinence from meat broth......?

Another Frenchman, Charles Dellon, who came to India in 1668 A.D., wrote about Indian physicians: "It is observable that

by their long experience they have made such observations concerning certain distempers peculiar to these countries that they practise with better success than the most learned foreign physicians, who upon certain occasions must follow in their footsteps if they expect to succeed in their cures in this climate".

Proper investigations into Indian medicine by Western scholars started in the nineteenth century. The most comprehensive study undertaken on any aspect of Indian medicine by a European scholar was by Hoernle in the Bower Manuscript, also called *Nava-niketan.*

Soon, Indians started collecting and cataloguing manuscripts on Indian medicine. Research on some of the plant products mentioned in Āyurvedic texts was begun by scholars trained in modern scientific methodology. The Indian Council of Medical Research encouraged and financed several such research schemes.

Newer diagnostic techniques, more effective drugs and the marvels of surgery, have placed allopathy head and shoulders above other forms of medicine.

Indian medicine needs to shed its lonely path and come into the mainstream of scientific progress. Then alone will it become capable of meeting present-day requirements.

OUR ANCIENT GAMES

From Harappa and Mohenjo-daro (c. 2500 B.C.) archaeologists have discovered chess pieces, dice and balls. We find references to a number of games in our epics and Purānas. All of you know how Yudhishthira lost his kingdom by playing dice with Duryodhana. *Chaugan* is a game mentioned in ancient texts. It was played with sticks and a ball and modern hockey is probably derived from it.

The games are depicted in our sculpture and painting. There is a fine sculpture at Ellora (5th century A.D.) showing Siva playing a game of dice with Parvati—this game is also known as *chaturanga* (later called *shatranj*—chess). Many of our old miniature paintings, from the 11th to the 19th century, also depict some indoor and outdoor games.

King Solomon, Semiramis of Assyria and Aristotle are among those credited with the invention of chess. The origin of the game has also been ascribed to Arabia, Egypt and China. But most historians are agreed that it was played in India earlier than in any other country. J. R. Murray, author of *A Short History of Chess*, says that the game originated in the north-west of India during the time of the Huris, A.D. 455-543. But the excavations at Harappa and Mohenjo-daro, as mentioned earlier, would suggest an earlier date.

That *chaturanga* is the fore-runner of modern chess is fairly established. The word means the four *angas*, limbs or divisions of the army: Foot-soldiers, Horses, Chariots and Elephants.

A number of stories are told about the origin of *chaturanga*. We will narrate one. Once upon a time, there was a *chakravartin*

(emperor) who spent a lifetime in warfare. When he became too old to fight, one of his ministers invented the sort of game he thought would provide diversion to his master—*chaturanga* with its four sections of the army. This minister was Shesha or Sassa.

This story has also been recorded by Muslim historians who have given the Indian King the name of Shihram. It goes on to say that the *chakravartin* was so pleased with the game that he asked its inventor to name his reward. The minister's choice was something apparently very small. He told the King he would have a gift of coins placed in a particular order on the chess-board: one coin in the first square, two coins in the second, four in the thirdand so on in geometrical progression up to the 64th square. On calculation, the King realised that he would need 9,223,372,036,854,775,808 coins to fill all the squares!

The earliest reference to chess outside India in the great Persian poet Firdausi's *Shahnameh*. In this work it is mentioned that, among the gifts sent by the King of Kanauj to King Khusru Nausherwan I (A.D. 521-576), was a chess set. From Persia the game spread to other countries. It was probably the Muslims who introduced it in Spain from which country other European nations learnt the game.

Over the centuries, *chaturanga* has undergone many changes. Though the original stumpy angular pieces remained more or less the same until around the early 15th century A D., the shapes were altered during the rule of the Rajput-Islamic dynasties. In France the power of the pieces changed. These alterations were adopted by all other chess-playing countries. It was not until the 11th century that the shapes began to assume forms adapted to various themes and designs to suit the requirements, tastes and fancies of different countries. However, Muslim countries used only geometrical shapes, since human or animal forms were forbidden by religion.

It was probably from the 17th century that elaborately designed chess sets started being made in India. Sometimes stones were used (encrusted with gold and set with diamonds and other gems). Gold, silver, exquisitely hand-carved ivory and sandalwood were also used.

Other countries had their pieces carved to represent actual people. One favourite theme was to represent the two sides as the portrait-busts of the opposing European Generals. Likewise (particularly in India and England), in the late 18th century, another theme was evolved which showed the opposing pieces carved to represent the English (East India Company) *versus* the Indians. A recent European set represents the Communists *versus* the Capitalists.

When the game gained in popularity, wooden sets began to be made in large numbers. The design varied according to the fancies of the various makers or the tastes of the patrons. But, since 1849, most of the sets, except in India, have conformed to a standard design which was registered by Howard Staunton.

By far the most popular materials for making chess pieces have been ivory and wood. In other countries, they also used porcelain. There have been various centres for making chess sets of ivory: Delhi, Jaipur and Trivandrum, among others.

Then and now:

In the late 16th and early 17th century, Mughal Kings had a large chess-board made on the stone courtyard of their palace, with men and women wearing suitable head-dresses denoting different chess pieces. They moved to different positions at the bidding of the two royal players—usually the King and the Queen. About three decades ago, this spectacle was re-enacted and filmed for the colossal Mughal period movie, *Pukar*, made by Sohrab Modi.

The Indian chess game has the King; the *Wazir* (not the Queen); two Camels (for the older Chariots); two Horses; two Elephants; and eight Foot Soldiers—the last four items being substitutes for the European Bishops, Knights, Castles and Pawns. In Indian chess, the *Wazir* has always taken the place of the Queen, which is European. This is in keeping with our idea of the game —which is a representation of war-fare in which women did not take part.

In the early period, the chess piece, the Bishop, was given very little movement and the King could also be captured. He was given the "casting" prerogative only a few centuries ago.

The Bishop is also known as PIL—a Persian word meaning "Elephant". which further proves the Indian origin of the game and of its being derived from *chaturanga*, where one of the chess pieces is the Elephant. The Queen, of the present-day chess game, was known a s*Firz* or *Farzan* in Persia, and as *Farzi* or *Wazir* in India, from the Mughal period to the present day. Those are Persian words meaning "Counsellor" or "Prime Minister" (*Wazir*). In French it was called *Fierge*, in Italian, *Fercia*.

All the squares in the early chess-boards were of one colour only, unlike the present-day two-coloured squares, which were introduced a few centuries ago.

Some chess sets show the King and the *Wazir* as seated figures and some show them standing. In some sets they are seated on decorated elephants, with a *mahout* and an attendant. The King's Elephant is taller than the *Wazir's* and also has an *ambari* or canopy. In a North Indian variant, the "white" side King is represented as "Lord Rama", the *Wazir* being "Lakshmana"; the opposing "black" side has "Ravana" for king and his "Lakshmana" for *Wazir*. Pawns of the "white" side are shaped like "Hanuman" and those of the "black" side are shown as "Demons". A recent Kerala variety has a standing "Rama" for King and "Seeta" for *Wazir* (a departure from the usual Indian practice of not having the Queen). For Bishop, Knight and Castle, it has a standing "Lord Ganesha" (Elephant-Headed God), "Kalki" (which is Horse-Headed) and a "Gopuram". Pawns of both sides are in the form of "Hanuman"; of one side they are "white" and of the other red.

The traditional colours of chess pieces are green and red, or black and white, or creamish yellow.

Gold or silver enamelled sets use more than two or three colours on a single chess-piece but one colour is predominant and distinguishes the piece. The predominant colours, usually are red and green for the two sides-

Another game played in North India on the chess-board is called "Sher Bakri" (that is, "Lions and Goats"). Out of the 32 pieces of the chess game 28 are called "Goats" (*Bakri*) and four

are called "Lions" (*Sher*) Two persons play the game. Each player is given 2 "Lions" and 14 'Goats".

The popularity of chess in India declined in the 20th century owing to the introduction of other forms of entertainment. However, a new in turn in chess is evident because of the world-wide publicity given to international events such as the Fischer-Spassky match played in Iceland.

One of the oldest Indian dice games is *chaupad* (also called *chausar*). This dice game has travelled as far as the U.S.A. where it is known as *pachisi* (from the Hindi word *pachis* meaning 25). Another simplified form of this game, which is popular in the U.K. and other countries of Europe, is ludo, played on printed cardboard, and not on cloth, as in the case of *chaupad*. In ludo, only one small cube-shaped die is used. A maximum of four persons can play the game. The game consists of a spread of cloth called *bichat* (sometimes even called *chaupad*), which is in the shape of a cross, and its four sides consist of three rows, with each row having eight squares. A maximum of four persons can play the game, each being allotted one side and given a set of four counters (*gotis*) of one colour. There are four such sets, of four different colours, for the four players. The game is played by throwing a set of three dice (*pasas*) on which different numbers of "dots" are marked, indicating different numbers which are totalled after the throw and, accordingly, the person making the throw moves his counter (*goti*) on the *bichat*. In rotation the other players do the same and the game continues. The player whose four counters reach "Home" first is the winner. "Home" is in the centre of the "board" and is reached from all the respective four sides, after the counter has moved all over the board.

Whereas chess and dice games go back to the earliest times in India, there is, curiously, no mention of card games here. It is however believed that card games in several variations developed in India out of the game of chess. The card game's early history is not known with any degree of certainty. This game, in its early period, had Hindu features. A fully developed indigenous card game was in India before the Mughals came. Around 1500 A.D., the card game was widely played in different parts of India. The games played included a 12-suit game of 144 cards and *dusavatar*—

a game ot 10 suits with 12 cards in each. All suits were based on incarnations of Lord Vishnu. *Ganjifa* (Cards), of 8 suits with 12 cards in each suit, totalling 96 cards, was probably based on the various departments of King Akbar's court. *Chad,* a card game of Mysore, had a maximum of 320 cards, with the number of suits varying from 18 to 4 and the number of cards in each suit from 18 to 9.

The variety in *ganjifa* is endless. The common variety has 8 suits, with each suit having 12 cards—in all 96 cards. This is popular in Delhi, Uttar Pradesh and Rajasthan.

Tradition has it that the *dasavtar* game was invented by the Malla King of Bishnupur (Bengal) in the 8th century A.D., Originally the cards were only round and circular. Cards were first introduced in Europe around 1300 A.D., in Sicily and Spain either through the Crusaders or the Arabs. They were 12 cards to a suit. Later on, it was probably the French who added the 13th card—the Queen. The 144 cards' game of India (of 12 suit with 12 cards in each) was reduced to a 96 cards' game (of 8 suits with 12 cards in each—no Queen) by Akbar.

European-type cards were introduced in India by the European traders. Their suits were named Spades, Diamonds, Clubs and Hearts, for which the Indian names were, respectively, 'Hukum', 'Int', 'Chidi' and 'Paan'.

All Indian cards were hand painted and not machine printed. They varied in size from a little less than 1 inch to about 4½ inches. There have also been many variations on the subjects and themes painted. Cards have been made from materials such as gold, silver, mother-of-pearl, tortoise shell, rhino-skin, leather, ivory, papier-mache, paper-board, lacquered paper, stiffened and lacquered cloth, wood, etc.

Snakes and Ladders

Snakes—and—ladders is a very old game of India associated with religion. In India there are lots of varieties of this game, besides the common and well-known one. The board is either painted on cloth or paper. In the different squares of the "religious-theme" version of the game are written either the various

types of evil deeds or good deeds that a man may perform after birth and, accordingly, either fall through a snake or climb through a ladder. Finally, in place of "Home", at the end of the game are shown the Hindu Gods or the Holy Feet, which every person aspires to reach throughout his life.

These types have been the fore-runners of the present-day snakes-and-ladders' board, which now does not have the gods or the religious symbols or words. *Through the former types of boards, the essence of religion (both Jain and Hindu) was very effectively conveyed to the common men.*

Changa–po, or pau-changa is also the common man's game. It is played on the floor, on freshly drawn board which is square shaped and has five rows of squares on all the four sides. It is played with either 4 cowrie shells or 4 *chians* (tamarind seeds). Four persons play the game.

Pacheta (also called *gittey* in parts of North India) is a game for women. The girls or ladies, seated on the floor and using one hand only, play this game with five cube-shaped pieces. These pieces or made out of differert materials—marble, papier–mache, stone, silver, gold, etc. Sometimes they are of different shapes also.

In the 5,000-year-old Indus Valley cities of Mohenjo-daro and Harappa, several balls have been discovered. In our epics, Puranas (including the *Bhagvata Purana*) and other early Indian literature, innumerable references to the ball and the ball games are found. Rama and Krishna played with the ball.. Krishna on the banks on the Yamuna with his friends, played various games with the ball. Balls are mentioned in old Hindu, Buddhist and Jain literature. In the Jain illustrated texts of *Kalpa Sutra* and *Kalakacharya Katha* (14-15th centuries A.D.) is depicted, through miniature paintings, the episode of the Jain Saint Kalaka successfully retrieving the ball dropped in a pond, without any aid, while he is himself seated in front of the Sahi King.

In early Indian texts, along with the games of ball, we find mention of the game of *chaugan*, played with a ball and sticks. Rama and his brothers, Krishna and his friends, and various

other divine characters played *chaugan*. The present-day game of hockey is evolved from the same *chaugan*. Certain old works of art, including some miniature paintings and painted cloth *pech-wais*, depict this game. From the curved sticks of the farmers of some parts of India and of the *gopas* (cow-herd boys), companions of Krishna, is evolved the shape of not only the present day hockey-stick but also the polo-mallet and the club for golf.

Polo is another old ball game of Indian origin which went out of the country through the British. We have game this mention edin our old texts and also depicted in paintings.

The carved Indian ivory plaques of the 1st century A.D., discovered at Begram, depict numerous scenes of a leisured life at court. The also show elegant women busying themselves with their toilet, playing ball and shuttle. In other old works of art, and miniature paintings in particular, are shown various love sports often depicting two standing lovers (many a time shown as Radha and Krishna) facing each other and tossing a flower-like *shuttle* from one side to the other. Such paintings belong to the period between the 17th and the 19th century A.D.

Archery comes naturally to the people of many parts of India, particularly in Rajasthan where there are great archers and fine swordsmen. Its origin dates from prehistoric times in India.

People of India and in particular of certain areas of India, are experts at the ancient Indian sport of big and small-game hunting. They can perform remarkable feats of horsemanship and skill while engaged in the sport. India abounds in big and small game. Hunting wild–boar is most popular in Rajasthan. Rajputs are renowned for the sport of pig-sticking and hog-hunting, which requires great courage on the part of both rider and horse, as they chase and kill the wild-boar with a spear.

Another favourite sport enjoyed by the Indian people was the animal fight (such as those of elephants, goats, camels, etc) and the bird fight (such as those of cocks and pheasants.)

Some other ancient out-door sports and games still popular in India are wrestling, swimming, *kabbadi*, kite-flying and *aankh-michouli* (blindman's buff). They have been mentioned in the early texts and also depicted in old works of art, sculpture and painting. (Sultan Singh Blackliwal in *Illustrated Weekly of India* dated 4-3-73 and 25-3-73).

EXHIBITIONS AND MUSEUMS

Third Asian Fair: Though the Third Asian Fair, Asia '72, held in New Delhi from November 3 to December 17, concentrated on the economic development of the region and indicated the further avenues for progress through co-operation, Indian achievement not only of the modern technological age but also in traditional culture was reflected in a big way in the fair grounds. As regards the former, the high-lights of the achievement were the Hall of the Nations, the biggest space-frame ever built in cement-concrete; the tremendous array of industrial and consumer goods produced by the public and private sectors; and the Textile Pavilion which showed that the traditional sensibility for craft design has been magnificently sustained and developed in the technological age. In the Theme Pavilion, the colour of Indian tradition and the tempo of the current transition to modernity got a vivid audio-visual presentation through two cinemascope projectors and sixty-four slide projectors. The Rural India complex recreated the pastoral beauty of the Indian countryside. It had many huts typical of the various regions of India and decorated with authentic artifacts of the areas. The Handicrafts Pavilion displayed not only the beautiful traditional work garnered from all parts of India, but also enabled visitors to observe over fifty craftsmen at their work. In the Nehru Pavilion, the personality of the leader who was mainly resposible for traditional India's transition to the modern temper was presented against the background of a fermenting age. In the auditorium and the open air theatre, classical and folk dances from all regions of India were presented, in addition to concerts and dances by visiting troupes from foreign countries.

Art Exhibitions (Calcutta): Of the art exhibitions the most important was an exhibition of paintings and sculptures organised

by the Federation of Artists and Art Organisations at the Birla Academy. Representative in character, it included some stimulating examples, from the member artists of affiliated art organitions. Among those which stood out from the rest were Bikash Bhattacharjee's powerful neo-realistic Antique, Maitreyi Banerjee's Devotion. Biren Laha's bold pen and ink drawing, Owl, Ganesh Pyne's sensitive temper Animal, and B R. Panesar's College. The sculpture section was more interesting in that it included some impressive works. Chintamoni Kar drew immediate attention for his fine delicate Ondine (bronze), Ajit Chakravarty and Niranjan Pradhan could be easily distinguished for their respective Hero with Spear (bronze) and Dancers (wood). Semiramis (stone) by Dilip Saha was noticed for its multi-dimensional characteristics. Of the graphics, the most impressive example came from Somnath Hore, woond I (mahe—impasto).

The annual exhibition organised by the Indian Society of Oriental Art at the Birla Academy represented mostly works done in Indian style, with one or two exceptions like Ruben Datta who experimented in modern idiom (Jashoda). Gopinath Das's decorative work, The Bird was, commendable. Of the individual painters, Maitreyi Banerjee attracted notice for her sensitive paintings based on typical geometrical patterns. Indian in outlook and sensitive in expression they indicated a different individual approach. The best perhaps was Sacred Vermillion (reproduced). Amalava Datta, a young boy, exhibited the possibilities of the Japanese art of origamy and the few examples presented by him at the Academy gallery were interesting. The other artist who deserves mention is Vivan Sundaram whose pen and ink drawings (Chemould Gallery) were a sheer delight. Moved by the rare poetic exuberance of Fablo Neruda's The Heights of Machhu Pichu (*Canto General*), the artist tried to re-interpret and re create the poet's imageries through bold and powerful drawings in pen and ink. Among others who deserve notice are Sarit Nandi, Mukunda Majumdar and Hara Partholodou who held their solo exhibitions at the galleries of the Academy of Fine Art.

Art Exhibitions: (*Lucknow*): The Lal Baradari Art Gallery of the State Lalit Kala Akademy had been aglow with a number of exhibitions during the season. Of these Dilip Das Gupta's

exhibition was on the Akademi's invitation and R.P. Nigam and B.N. Shukla held their one-man shows on their own. R.P.Nigam, who came from Kanpur where he teachers Art, exhibited his 14 canvases in oil in assorted sizes. It was his second solo, where he seemed to touch many a theme which is not within the conventional parameter of either the traditional figurative or the modern abstract, with considerable success both in their drawing and hues. He appears to be still in search of a stroke of his own where he can synthesise the Western influences, the Impressionists and the *avant garde* modernists, in harmony with the Indian classical tradition. *Messenger, In the city, Blue Fish* and *Daughter of the Soil* illustrate his strong progress toward that synthesis.

Dilip Das Gupta is a senior artist of this State with many a laurel won at home and abroad. He lectures in the Fine Arts Faculty at the Banaras Hindu University. This was his eighth solo but his first in Lucknow. His earlier shows have been at Delhi (1963, 1965 and 1967), Calcutta (1968), Jamshedpur (1968), Germany (1964) and Italy (1964). He has been the recipient of the National Award twice (1966, 1970) and the President's plaque in 1962. He first became famous for his water colour landscapes. Dilip Das Gupta exhibited as many as 19 oils and 26 drawings in pen and ink. Most of the drawings were exquisite in their design and workmanship and expressly communicative in their mellowing maturity. But his canvases, predominating in blue and green hues, with some of Varanasi temple deities as their declared theme, appeared to be more experimental than finished works of his known style of painting. May be he is in quest of new pastures both in theme and expression while trying to sustain the areas of modern abstractism.

B.N. Shukla, yet another young artist of Lucknow who also teaches at the Government College of Arts and Crafts held his second one-man show at the Akademy Gallery. In his 19 titled oil canvases he appeared to have travelled a long way from his first solo in 1970 for he has developed much in his drawing, colour harmony and expression of philosophical themes in abstract compositions. *The Trinity. Maze of Life* and *the Mast of the Rudra* amply display his organic control over line, colour and theme, successfully expresses what he desires to state. (*Cultural News from India*, Vol.XIV, No.1, January 1973).

EXHIBITIONS OF GRAPHICS

Drawings and graphics by Aravind Varma, numbering 24 were exhibited in "Konarak" the pavement gallery on the MG Road from June 2 to 6.

Aravind Varma hails from Punjab and is a student of the Government School of Arts, Chandigarh. The present show is his second one-man exhibition of graphics, the previous one having been held in Chandigarh. Some of his works have been brought by the Punjab University and other private collectors in Chandigarh.

There is a series of 'My World' among his graphics, which depict an imaginary ideal world of his own in which the bull as a symbol of power, endurance and service, figures prominently in an enviromnent of weird figures represented by amorphous shapes resembling the Chinese dragon as symbols of greed, cruelty and evil. 'Searching' and 'That's Me' are symbolic representations of his ideals of goodness and the natural tendency in man to fall before the temptations of a life of sensual pleasures.

"Forgive', a drawing in delicate nuances of linear art indicates the beauty of forgiveness. 'Vortex' is the symbolic picture of man's headlong dive into a pleasure-loving life and his getting caught up in the whirlpool of 'Samsara', 'Chase' represents the biological fact of man's pursuit of the sex-life and domination over the woman.

Aravind Varma brings to graphic art, a highly symbolic imagination and, and in a white and black harmony of lines saturated with the symbolism of Hindu and Christian religious traditions, elevates graphic art to the level of paintings. The pavement exhibition is unique for its mystical content and delicate linear exuberance in technique.—D.R.

[Press Report in *The Hindu* dated 9-6-1973]

MUSEUMS IN U.S.S.R.

The total number of museums amounts to 1,144, of which 995 have opened since the October Revolution. More than 700 museums, in all the republics, territories and regions, are those of local studies dealing with geographic conditions, history, culture and mode of life in the given area, or else are memorial institutions opened in honour of outstanding statesmen, politicians, scientists, writers, and musicians. In the capitals of Union Republics and, in nearly all major cities there are art museums. Apart from those mentioned above, there is a great number of museums dealing with general history, military history, revolutionary history, natural sciences, ethnography, theatre, and so on. The leading museum city in the country is Moscow, which has more than 150 museums and exhibitions, including the Central Lenin Museum, whose 23 rooms exhibit materials telling the life and work of the founder of the Soviet state. Here visitors can see Lenin's manuscripts, first editions of his works, newspapers carrying the first public editions of his articles, Lenin's works printed in other languages of the world, historial party documents, Lenin's letters to relatives and comrades-in-arms, his personal articles, and also outstanding paintings, sculptures, drawings and handicrafts devoted to the leader of the world's working people. The Central Museum of the Revolution in Moscow, with its collection of historico-revolutionary relics, reflects the history of three Russian revolutions and the process of socialist construction in the Soviet Union. The treasure house of Russian fine arts, the State Tretyakov Gallery, also offers masterpieces of Soviet painting, drawing and sculpture. The history of world art can be traced in the halls of the State Pushkin Museum of Fine arts and the State Museum of Oriental Art. The Kremlin museums are extremely interesting. Another leading museum centre is Leningrad, home of the State Hermitage Museum, one of the leading museums in the world, which represents the arts of all peoples in the world from ancient times to the present.

Other extremely popular museums in Leningrad are the State Russian Museum, a branch of the Central Lenin Museum, the Museum of Anthropology and Ethnography and the museum of Zoology. Among other Soviet museums, mention should be made of the Kiev State Historical Museum, the Art Museum in Tashkent (Uzbek S.S.R.), the Museum of Latvian and Russian Arts in Kiga, the Museum of Fine Arts in Ashkhabad, (capital of the Turkmen S.S.R.), and the Museum of Western and Eastern Art in Odessa. Soviet museums play an important role in propagating socialist culture, and help the broad masses of working people, study the cultural heritage of the past. Museum staffs read lectures and give talks at industrial enterprises and on collective and state farms. They give consultations and organize stationary and mobile exhibitions. Many museums run art circles and seminars. Museums are not only cultural and educational but scientific research centres. They carry on extensive scientific research and publish scientific papers, catalogues and guidebooks. Leading museums maintain contacts with museums and cultural centres in many countries and help one another in holding exhibits. Every year the attendance at museums grows not only among Soviet citizens but among foreigners also. The Hermitage, for example, is annually visited by more than 3 million people. In 1970 Soviet museums were visited by approximately 112 million peoples. (*Moscow News*, No. 23 (1170), June 9, 1973)

ARTS AND CRAFTS

THE KISHANGARH SCHOOL OF PAINTING.

Kishangarh was one of the 19 Princely States which merged to form the State of Rajasthan. The State took its name after Kishan Singh, who founded the town in 1609 A.D. The distinctive style of painting was, mainly developed during the reign of Raj Singh (1706—1748)—the chief source of inspiration being his son Savant Singh (1699—1764) a highly talented prince.

The young prince was a renowned poet, writing under the *nom de plume* of Nagari Das, and some of his well known works are Manoratha Manjari, Rasika Ratnāvali and Vithar Chandrika.

His artistic sensibility combined with a deeply religious temperament and, consequently, in the theme of his verses as well as in the paintings of the period—"Sringar Ras" intermingles so closely with "Bhakti Ras" as to be almost indistinguishable. The main subject-matter of the verses of Nagari Das, as well as the paintings of the period, are the variations of the traditional Radha-Krishna theme. The best of the paintings of this period are obviously by more than one hand but their superlative quality and similarity in style are amazing. Their guiding impulse could be none other than the Poet-Prince Savant Singh himself.

While indisputably the distinctive style of Kishangarh owes itself to a Savant Singh, the main inspiration, perhaps, came from his beautiful pasvan (mistress), Bani Thani. The graceful young woman was also gifted with artistic sensibility, She was a

poetess who wrote under the pseudonym of "Rasik Behari". Both the prince and his mistress loved poetry and art, had an abiding passion for them as devotees of Radha and Krishna. It was this deep emotional attachment of two gifted people which became the mainspring of the art literature of the period. Such was his attachment to Radha and Krishna that Savant Singh abdicated in 1757 in favour of his son, Sardar Sing, and both he and Bani Thani spent their remaining years in Brindaban. The distinctive characteristics of the Kishangarh School lie primarily in the depiction of the female form which are attributed to the personality of Bani Thani. Thus developed the distinctive features of the Kishangarh school—the exaggerated slanting and slightly uptilting eyes with a peculiarly liquid expression, the high forehead, the sharp and pointed nose, the slender arms with long and delicate fingers and the highly attenuated waist. In the image of Bani Thani, the artists fashioned the divine Radha and everything beautiful in womanhood. It seemed as if the distilled essence of all that the "Sringara" poets sung, lay in this lovely creation. In their wealth of detail and ornate presentation, they are like any other Rajput mainiature paintings, but the background of hillocks, ponds, trees and palaces has a local flavour of its own. Having reached its pinnacle in the time of Savant Singh, Kishangarh painting started to decline in the latter half of the 18th century. The tradition continued till about the close of the 19th century to the time of Sardul Singh (1880—1900 A.D.). After that the traditional art form more or less disappeared from Kishangarh. The credit for bringing Kishangarh art into the limelight rests mainly with the late Eric Dickinson, who was Professor of English Literature at Aligarh University and later at Government College, Lahore. It was the fruit of his research and effort from 1942 to 1951 that the Kishangarh school of painting was rediscovered. The Lalit Kala Akademi took over where Dickinson had left and the publication was brought out by Karl Kandalavala in 1958. This brought to the notice of the world of art, the pride of place that Kishangarh rightly occupied among the many well-known schools of Rajput paintings, like Bundi, Kota, Jaipur, etc., In fact, in sheer excellence of conception, dexterity of execution, sensuousness and, above all, the beauty of female form, the Kishangarh school has hardly any peer. The unravelling of this artistic treasure generated a demand for old Kishngarh paintings.

Many local artists started copying the old masterpieces on old paper to pass them off as originals. But the entire credit for new and original creative work in the Kishangarh tradition is due to Dr. Faiyaz Ali Khan and his son Shahzad Ali Sherani. Dr. Faiyaz Ali Khan is one of the foremost scholars on the Kishangarh School of Art in general and Nagari Das in particular. (Adapted from "Revival of the Kishangarh School" by R. L. Misra in the *Illustrated Weekly of India*, dated 25—3—1973).

U.S.S.R. TURKMEN ART

For centuries Turkmen people have carried on rich artistic traditions. However, their professional art was born not more than several decades ago. Before the October Revolution their aesthetic aspirations could only find reflection in ornate household articles. In these Turkmenians excelled.

In the second half of the 13th century Marco Polo, the famous Venetian traveller, after observing the lives of Turkmen tribes, wrote that they created "the finest and most exquisite carpets in the world". Today Turkmen carpets are as famous as ever. The use of red, the traditional colour, and of specific patterns has persisted since time immemorial.

The national garb of Turkmen women is very attractive. Here, too, the predominant colour is red. Its richness complements the filigree pattern of intricate embroidery and the dull glitter of the massive silver decorations.

Turkmen jewelry likewise attests to high artistic standards. National aesthetic ideals are reflected in the elegant combination of slightly chased silver studded with large-sized carnelians.

The Civil War was raging when, in September 1920, an art studio was step up in Ashkhabad in one of the red Army units. Twenty-year-old shepherd, Beshima Nurali, who later became the first professional artist in the history of Turkmenia, learnt the ABC of the fine arts there.

His art, optimistic and humane, has imbided the unsophisticated simplicity of folk conceptions. The son of a farmhand, his eyes were opened by the October Revolution to behold radiant vistas. This radiance is reflected in his inspired portrayal of the people of Soviet Turkmenia and the new features of their life in Soviet years. His "Victory Day" (1945) is filled with so many true-to-life situations, caught with a keen eye, and is so brimming over with unsuppressed human jubilation, that one cannot tear one's eyes away from it.

Art in Soviet Turkmenia develops on the basis of the finest folk traditions and the wealth of experience accumulated by Russian artistic culture. Most of the modern artists in the Republic have acquired professional education in Moscow and Leningrad, and were taught by famous Russian masters.

Izzat Klychev, a graduate of the Leningrad Academy of Arts and a winner of the U.S.S.R. State Prize, is justifiably regarded to be one of the most talented artists.

The women in his painting "Baluchis" (the name of a nationality living in Turkmenia) look almost heraldic, majestic in stature, their dark eyes seeming to express the very soul of the people. The artist is very careful in painting the elements of their traditional attire, hair-do and embroidery. Klychev prefers vivid, intense colours—yellow, red and blue. In his cavasses they look very effective and pure, a part of the harmonious whole.

The painting "New Birth" shows a geological expedition in the Kara-Kum Desert. The sun-scorched sand dunes seem boundless, but people harness them with iron rigs and extract their hidden treasure. This painting seems to be exuding heat, as if it had inhaled the burning breath of the sands. Its golden-red colour scheme is extremely effective.

The red pigment one sees so often in the work of Turkmen artists is not accidental. A symbol of beauty, it is the basic colour, as has been said, of Turkmen carpets and the traditional dresses of Turkmen women. During the brief spring, the land blossoms witch crimson tulips, which are reflected in a different way in artistic works.

The bright red dress of the woman in "The First", by young Turkmen artist Durda Bairamov, is involuntarily associated with the revolutionary banner and the women herself is a romantic symbol of liberty. In the artist's portraits, especially of women, and in his still lifes, the red colour creates an atmosphere of festivity and rapturous admiration for the world.

A festive riot of colour is typical of another artist, Stanislav Babikov, whose strong point seems to be his ability to give a penetrating portrayal of a moment, for instance, a hot summer

day on the seashore, glittering water and silhouettes blurring in the dazzling sunshine ("Visiting Caspian Fishermen"), or morning freshness and anxious anticipation ("Horses at Dawn") and the subtle human emotions, as in his portraits of women.

Chary Amangeldyev concentrates on the traditional Turkmen mode of life and unique customs. There is no psychological implication in his characters. Nevertheless, he knows how to convey the emotional backgrounds of an episode, giving his aesthetic interpretation of the intransient values of the peoples life.

Juma Jumadurdy is excellent in compositional and portrait sculptures. He has a wonderful feeling for the plasticity of his material. He made his sculpture "Turkmen Woman" out of one piece of wood by skilfully using its natural shape.

Mamed Mamedov's paintings show striking line and an almost musical quality of composition. His "Praying for Water" revives the distant past of Turkmenia, when water, identified with life, was worshipped like a god.

The influence of oriental artistic traditions is strikingly evident in the works of young Turkmen artist Kakajan Orazaepesov, The style of his technically interesting works (lacquer on wooden panels) resembles oriental miniatures which leave a lasting impression on account of their exquisite colouring and filigree precision.

Varied in artistlc styles, Soviet Turkmenia's art gives a vivid panoramic portrayal of Turkmen life. It is a bright page in Soviet multi-national calture. (Margarita Khalaminskaya, in *Moscow News*, dated 2-9-72.)